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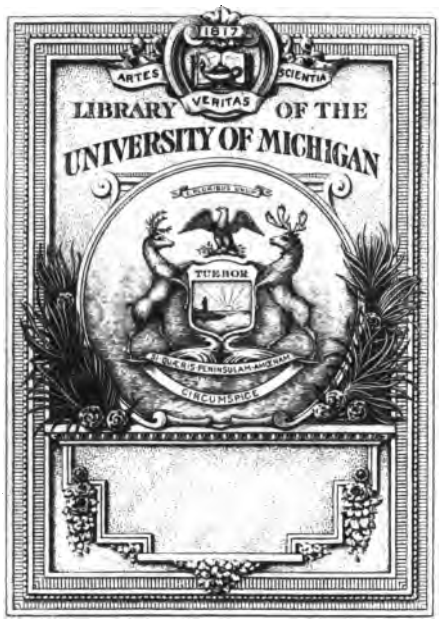


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THE

# Worcester Music Manual

FOR THE USE OF

Supervisors and Teachers

IN THE

PUBLIC SCHOOLS

---

CHARLES IRVING RICE

---

SECOND EDITION.

PUBLISHED BY AUTHORITY OF THE SCHOOL COMMITTEE
OF WORCESTER, MASSACHUSETTS
1903

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# A GLANCE OVER THE WHOLE FIELD.

### Reversible Advice for Supervisors.

Plan your Work and Work your Plan.

### Something for the Grade Teacher.

"There is time enough if we only know how to use it! People who, like Goethe, never rest and never haste, complete their work and escape the friction of it."

*The Forest of Arden*—Hamilton Wright Mabie.

### Something for the Teachers of Vocal and Instrumental Music

in the community, with whose work that of the teacher of Public School Music is inseparably linked.

"Are you contented for purposes of teaching and for the credit of our system as a science, that our theory should be complicated where it might be simple, contrary to the usages of musicians where it might be in agreement with them, and false where it might just as easily, yes, much more easily, be true." *Dont*—Dr. G. F. Root.

### Something for Everybody.

"With consistency an honest man has simply nothing to do; what he says to-day he may see to be wrong and unsay to-morrow. To shut his eyes to the truth or continue in the wrong for the sake of being *consistent* is the height of folly." *Essays*—Emerson.

"A foolish consistency is the hobgoblin of little minds."

*Essays*—Emerson.



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## Acknowledgments and Observations.

Every child born into the world inherits the accumulated wisdom of the preceding centuries, but while we acknowledge the good that has come to us through our predecessors it is doubtless true of the science of *teaching music* as well as of the science of music itself, that one gets his most valuable lessons from mingling with his contemporaries.

Many of my best ideas have come to me through grade teachers with whom I have been associated. In giving credit to the following list of teachers and friends for assisting me in one way or another I do it, in most cases, without the knowledge or consent of the persons named, knowing that there are points in this manual which will be a sore grief to some of my well beloved Nestors. In this book I am a free lance, hesitating not to make my feeble attempt to overthrow venerable dogmas which seem to me erroneous.

In accordance with the ideas just expressed regarding contemporaries, I wish first of all to acknowledge the inspiration which has come to me through association with my wide-awake, clear-sighted and indefatigable assistant, Maud L. Davis.

I hereby acknowledge special indebtedness to G. W. Chadwick, F. H. Ripley, Thomas Tapper, W. L. Tomlins, W. S. B. Mathews, Emory P. Russell, W. Seymour Twichell, Sterrie A. Weaver, L. B. Marshall, Samuel W. Cole, J. M. McLaughlin, J. Chauncey Lyford, Ralph A. Lyford, among the living; to the late H. E. Holt, and to the late Dr. Geo. F. Root, from whose little book "Dont," many ideas have been taken. While I have consulted many works, both American and European, I have allowed no authority, however high, to dictate *theory* to me which is contrary to usage. *Usage* (I do not refer to provincial or local usage), *universal usage* is supreme;



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so when a musician says that his staff has only nine degrees in face of the fact that all musicians use eleven, he should be labored with until his *theory* is squared with *fact*. A new idea in theory is about as rare as a new joke.

We rediscover old ideas, but seldom originate new ones. To illustrate: I have a little book by W. B. Bradbury, published in 1847, which says in a chapter on "Rhythm," "The characters or signs used to represent the length of sounds, are called NOTES."

In a chapter on "Melody" occurs the following: "The characters used to represent and regulate the *pitch* of sounds are the STAFF consisting of five lines and four spaces . . . . , and the clefs."

One of my friends, in a preface less than a year old, speaking of W. H. Cummings, of London, says: "To that writer belongs the credit for the idea here developed, that notes represent duration only, *i. e.*, time, while pitch is represented by the lines and spaces of the staff."

As a matter of fact the first edition of Mr. Cummings' work was published just thirty years after the one mentioned above, and nine years after the "Down East" American, Mr. Bradbury, had passed to his rest.

I infer from this that the credit cannot belong to Mr. Cummings, and with this fresh in mind, all acknowledgments in the following pages are *qualified*, subject to the incompleteness of my present knowledge. Any corrections will be cheerfully accepted.

## "A HEART TO HEART" TALK BY THE DIRECTOR OF MUSIC TO THE GRADE TEACHER.

People are elected to take charge of Music, Drawing, Physical Culture, Manual Training, or Cooking, in the public schools because of demonstrated ability in their chosen subjects.

They are probably as well fitted *by nature* for their work,



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as any of the teachers who are under their direction, and undoubtedly much better fitted by their *special training*.

The general teaching force is not selected because of aptness in imparting knowledge in these special branches, but on a basis of all-round training in Education.

Some of these grade teachers have had lessons in piano playing, and some in singing, but by far the larger number have given the subject of music no special attention.

To compensate for their lack of training in any special subject, these teachers bring to their work a general training in educational processes which makes them a power in the carrying out of any well ordered and carefully detailed scheme of work.

To plan and explain the work down to its smallest detail is the function of the director of music who would secure the best results, and with this idea in mind this manual has been written.

One of the eminent musicians of this country, after reviewing with me the contents of this book, said: "I had no idea that any such fineness of detail is necessary in carrying on the work in public schools, but these directions in the hands of one who knows how to teach reading or arithmetic if followed carefully must produce results."

With the exception of the teaching of rote-songs and the giving of ear work, the processes detailed in the following pages require no vocal display on the part of the teacher. Drill work of a practical and interesting sort, both in tune and time, has been arranged so that the teacher who hesitates at singing in the presence of others, can feel as much at ease in conducting a lesson in music as one in Geography, *if she knows her subject*. Skill in *teaching*, not skill in *singing*, is the prime requisite.

In order that this skill may be developed to the fullest extent, the director must sometimes meet his teachers *en masse* as a class; must sometimes do class-room work in



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the presence of the regular teacher, and sometimes observe the work of the teachers in their respective rooms. No scheme is complete which omits any one of these means to the end.

*The Director of Music* at the present time visits the rooms under his immediate care once in six weeks. In other words, out of a presumable total of thirty lessons, the regular teacher gives twenty-nine and the specialist, one. The regular teacher should be alive to the fact that the teaching of the specialist is of no avail unless its methods and processes are followed up and reinforced by daily use.

The specialist who is obliged for two successive visits to teach the same points, knows that the regular teacher has missed the import of things. The specialist has "planned his work" but, through lack of right understanding in the case, has failed to "work his plan."

### The Business of the Specialist.

The business of the specialist is, by the employment of every available means, to encourage the regular teacher and to make her expert, efficient, and confident in her work. He realizes that the class, in his absence, must be impressed by a daily presentation of the principles by the regular teacher and when he visits a class once in four, five, or six weeks. as the case may be, it is not with the idea of doing the *class* any lasting good, but with the very definite idea of *leaving* a *stronger teacher* in the room when he goes. He is paid to keep up to date and know the latest and best in his line.

### The Business of the Regular Teacher.

The business of the regular teacher while the specialist is in the room is to bend every energy to the acquirement of greater skill and efficiency in teaching the subject. She must know that the only pupil in the room whom the spe-



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cialist recognizes, sits at the *large desk* in the clear space in front of the *smaller ones*.

The normal graduate whose time and energy have been spent in learning to teach the studies of the curriculum cannot appreciate the fine points displayed by an expert in the art of driving an ox team. The plow-boy is not fitted by his training to grasp the important points in a finely conducted lesson in arithmetic, and seeing how smoothly things go on, each is apt to belittle the work of the other. A supervisor once told me of a teacher who busied herself about various matters during his visit. Upon being requested to give attention to the points of teaching which were being illustrated, this teacher asked with some acerbity: What For? "What did you say?" I asked. "Not much of anything," was the reply, "but I concluded that the density was impenetrable and arranged to have the work done by another teacher." Now this teacher doubtless honestly thought that it was a waste of time to sit and watch the specialist conduct a lesson, for it all went so smoothly that apparently any one could do it.

College Graduates have been known to become expert cattle drivers—Plow-Boys have been known to become eminent mathematicians—School-Teachers with indifferent skill as performers have often developed great skill as teachers of music, but none of these things happen unless the C. G., the P. B., and the S. T., realize that there is something to be learned, and bend their energies to the acquirement of the necessary knowledge and skill.

Because things go smoothly when the supervisor takes the class do not suppose that the subject can be successfully taught by hap-hazard methods.

The best pilot is not the one who gets the vessel safely off the sunken rocks, but he who avoids the rocks altogether.

The most skillful teaching is that which makes its point without friction.



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## CHAPTER ONE.

### Some of the Real Things in Music. Facts Apart from their Representation.

1. The study of vocal music has to do with tones and their several characteristics.

2. Tones are musical sounds as distinguished from noises. ("Tone" is never used in this book as a term of measurement, and "Semitone" is used only in sec. 293.)

3. Tones are produced by the regular vibrations of a "sounding body."

4. Noises result from irregular series of vibrations.

5. Tones as used in music, have four essential characteristics which are designated by the following words: Pitch, Force, Quality or Timbre, and Length or Duration.

6. That difference between two tones which invariably leads one untutored in the science of music or acoustics, to describe one tone as being "higher" or "lower" than the other is a difference in Pitch—a difference in the highness or lowness of tones.

Slow vibrations produce tones of low pitch. Rapid vibrations produce tones of high pitch.

7. For the sake of definiteness seven of the points of pitch between a tone and its octave (sec. 12) have been given absolute and individual names as distinguished from relational names. (Secs. 26, 27, 28, 33, 34.)

NOTE. Of course it will be understood by anyone who reads the references under sec. 7, that each of the twelve different pitches in



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any octave has an absolute name. Five of them however, being provided with names which are in a certain sense derived from the other seven and are also variable (sec. 29), it is convenient to take the above statement as a foundation and build up from it until the *whole* truth is known.

8. For this purpose the *names* of the first seven letters of the alphabet have been taken in regular order. Each succeeding one from A to G names a higher pitch and at the octave (sec. 12) the first name reappears. This happens, no matter at what point in the series a beginning is made. Starting at the pitch C, the names follow thus: C, D, E, F, G, A, B, C. (See also secs. 16, 27, 28.)

NOTE. These names C, D, E, G, F sharp, etc., *are not letters* but symbols used in the science of music to designate the pitch, or point of highness or lowness in tones. To illustrate, $H_2O$ is the symbol for water and the combination is purely technical and applies only to the science of chemistry. I never heard of a teacher of chemistry who referred to this and similar signs as "letters" or as the "chemical alphabet." Our teaching must be clear in this respect, and any allusion to these pitch symbols as "letters," tends to foster a wrong idea. The common practice of spelling words like bag, cage, etc., *on the staff*, befogs the mind as to the real office of these characters, C, D, E, etc., as symbols of tones.

9. Force, the comparative loudness or softness of tones, is a characteristic which is self-evident to all hearing people, and needs no definition.

10. Quality or Timbre is that characteristic which enables us to distinguish between the kind of tone produced by different instruments or voices sounding at the same pitch. The tone of a horn would never be mistaken for that of a violin.

11. Duration, or the comparative length of tones is, like Force, a self-evident and entirely relative characteristic.

12. As stated in section 3, tones are produced by vibrations. An open string in vibration produces a certain pitch. If stopped exactly in the middle each half will vi-



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brate twice as rapidly and this doubling of the number of vibrations produces a higher tone which blends perfectly with the tone of the string when vibrating through its whole length. The interval between these two pitches is called an Octave. (Sec. 209.)

13. All tonal systems recognize the interval of the octave.

The difference between one system and another comes about through the varied number of parts into which this interval is divided.

14. The Chinese system divides the octave into five portions which gives, from a given tone to its octave inclusive, six resting points of pitch. These scales, as well as those of some of the old Gaelic peoples which are similarly constructed, are called Pentatonic, or five-toned scales, and the smallest interval used is a major second.

15. The Hindoos, Saracens and other Orientals, are said to recognize intervals as small as quarter-steps which of course greatly increases the number of tones possible within the limits of an octave.

16. Our modern tonal system recognizes intervals (minor seconds) as small as half-steps, which allows of the division of the octave into twelve *nearly equal portions* (half-steps), affording from a tone to its octave inclusive, *thirteen* stepping-places. (See Temperament, Century Dic., or Grove's Dic. of Music.)

17. A Key in music is a Family of tones, and each and every key in its entirety *includes all these stepping-places.*

18. A certain definite selection of stepping-places from among these half-steps according to the formula of "two whole-steps and a half-step, three whole-steps and a half-step," constitutes what is called the Major Diatonic Scale.

19. The tones which make up this succession have been called the Regular Members or Diatonic Tones of the Key Family and, as will be seen, they utilize but eight



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of the thirteen stepping-places within the octave. (Sec. 12.)

20. Beside these diatonic tones we can use any or all of the five remaining stepping-places, Occasional Members or Chromatic Tones, first, for the purpose of giving variety to the music in any given key, and second, for the purpose of bridging us over into some other key (secs. 16, 17) which is built up from a higher or lower pitch than that in which our composition first started. (Secs. 30, 31.)

21. When used in this latter way at least one of the tones which was occasional (chromatic) in the old key, remains to be reckoned as a regular (diatonic) member of the new key, while one of the tones which was Diatonic in the old key becomes Chromatic in the new.

22. The Regular Members of the Key, then, are the tones of the Major Diatonic Scale, while the Occasional Members are the tones which are left after the selection has been made from the thirteen points of pitch in accordance with the formula given in section 18, and the words which are properly used to designate these two classes of key-material are Diatonic and Chromatic.

23. The Diatonic Members of the key families, both Major and Minor, are known by the following names which are descriptive of *key relations* and therefore not absolute, but relational names.

1st tone. Tonic. The most important sound of the key, —the keytone.

2nd " Supertonic. The sound above the tonic.

3d " Mediant. About midway between the tonic and dominant.

4th " Subdominant. The under dominant, fifth tone *below* the tonic.

5th " Dominant. The second most important tone in the key.

6th " Submediant. About midway between the tonic and subdominant.



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7th " Leading-Tone. So called because of its impossibility as a resting-place. It points the way imperiously upward to the Tonic. (Compare with secs. 7, 8.)

24. We are to avoid the belief that the chromatic tones are foreign to, or do not belong to the Key. They are foreign to the *major diatonic scale* which is the orderly succession down or up from any tone to its octave following the formula given in section 18.

25. The Key, however, is quite a different matter, and includes all the tonal material ever used in the construction of music which is familiar to you and me. (Secs. 16, 17, 18, 19.) It is the universal storehouse to which all composers resort for material to carry on their music building, while the Major Diatonic Scale is but *one*, and that the simplest, of the innumerable melodies which have been constructed from the key-material.

26. If we take the pitch C for key tone, the stepping-places indicated by the names C, D, E, F, G, A, B, C, coincide with the formula for the upbuilding of the Major Diatonic Scale. (Sec. 18.)

27. The five remaining pitches (sec. 16) are designated in an ascending series by annexing the word "sharp" to the name of the *lower* of any two pitches which are a whole step apart, and in a descending series the same five actual points of pitch are designated by annexing the word "flat" to the name of the *higher* of any two pitches which are a whole step apart.

28. The pitches F and G are a whole step apart.

The half-step higher than the pitch F, is named F sharp.

The half-step lower than the pitch G, is named G flat.

Now, if the three foregoing sentences are understood, it will be evident that the pitches named F sharp and G flat are equivalent in everything except name. *The ear recognizes no difference.*



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29. Tones which are equivalent in pitch but different in name are called Enharmonic Tones. (Secs. 275, 276, 277.)

NOTE. There is an actual difference between the pitch F sharp and the pitch G flat which can be expressed on instruments like the violin, but on all instruments of fixed pitch, like piano and organ, where one key has to answer for both pitches, the difference, which is very slight, cannot be shown.

30. Each one of these twelve different points of pitch (sec. 16) may be taken as the starting-point, home-tone, or key-tone from which may be built up as many different keys, each containing precisely the same material, capable of being combined in exactly the same melodic and harmonic relations and differing in no way save as to pitch. (Secs. 6, 208.)

31. The whole scheme is like a huge thirteen story apartment block, each apartment containing thirteen rooms and the different apartments identical as to fittings and furnishings of all sorts. The person who lives on the third floor comes home late at night and is carried in the elevator to the tenth floor. There he retires in a familiar room sleeps in a familiar bed, and not until morning when he looks from his window does he discover that he is not in his own home, and the only thing that tells him then is his altitude as he looks abroad—everything inside is just the same as he is accustomed to.

A blind person might successively occupy all the floors in this block and never discover that he was away from home. The person who sings about the house off-hand never thinks of key, and it makes no difference—he sings his tune just as readily in a key which would require for its representation a signature of seven flats or sharps, as in one where all the degrees are natural.

32. All major keys are exactly alike in their structure and internal content; their difference is one of representation.



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Keys which require the use of the word "sharp," in designating their diatonic tones (secs. 22, 27, 28), are often called "Sharp Keys."

Keys which require the use of the word "flat," in designating their diatonic tones (secs. 22, 27, 28), are often called "Flat Keys."

33. Each tone, musically considered, has one name which identifies it as an independent, individual tone aside from all relationship with any other tone. Examples of these absolute names are: A, C, B, G, F sharp, B flat, etc. (Secs. 7, 8.)

34. Tones also have at least three sets of names which describe them in their relation to other tones. Examples of these relational names are: 1, 3, 5; sharp 4, flat 7; or do, mi, sol, fi, te; or tonic, mediant, dominant, etc. (Sec. 23.) Thus in the statement: "The pitch E is the mediant or 3 in the key of C major, sung to the syllable mi," observe that "the pitch E" is the absolute name of the tone without regard to any other tone, while "mediant" "3" or "mi" all imply the relationship of the individual tone to the other members of the key-family.

35. In speaking orally or in print of different pitches, it is necessary to have some means of identifying them as belonging to the compass of men's voices or those of women and children. For instance: when the pitch G is mentioned no one can tell whether it is the low, medium, or high G of the man's voice or the low, medium, or high G of the woman's voice which is referred to. In order that all pitches may be designated with exactness, the following method, the foundations of which were laid by Pope Gregory the Great, is used.

The pitch C, represented by the *second line below the bass staff* (sec. 51), together with the eleven other succeeding pitches of the octave including the B represented by the second line of the bass staff, belong to the Great Octave,



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and the pitches in this tone strata are designated in printing, by capitals. The octave next above is called the small octave, designated by small symbols; and all succeeding octaves are called once marked, twice marked octaves, etc., or one line, two line octaves, etc., according as the symbols of pitch have one, two or more short horizontal lines drawn over them.

C, D, B flat, G sharp, belong to the great octave.

c, d, b flat, g sharp, belong to the small octave.

$\bar{c}$, $\bar{d}$, $\bar{b}$ flat, $\bar{g}$ sharp, belong to the $\left\{\begin{matrix}\text{one line, or}\\ \text{once marked}\end{matrix}\right\}$ octave.

$\bar{\bar{c}}$, $\bar{\bar{d}}$, $\bar{\bar{b}}$ flat, $\bar{\bar{g}}$ sharp, belong to the $\left\{\begin{matrix}\text{two line, or}\\ \text{twice marked}\end{matrix}\right\}$ octave.

$\left\{\begin{matrix}\text{One line, or}\\ \text{Once marked}\end{matrix}\right.$ $\bar{c}$ is commonly called middle c.



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## CHAPTER TWO.

# RHYTHM.

### Duration of Tones and Silences. Beats and Measures.

36. Probably nine people out of every ten in passing a good street piano in operation are impelled unconsciously to adjust their steps so as to coincide with a certain invisible something which is throbbing or pulsating all about them. These pulsations, which induce people to "keep time" by means of body, head, leg, or arm motions, are called Beats.

These invisible but potent impulses, which so sway us, are the Real Beats or accents of music in distinction to the *representation of beats* in printed music.

37. Beats naturally arrange themselves, by reason of the regular recurrence of one that is stronger than its fellows, into groups of regular size. The words "beat" and "hour" are used very similarly. A Beat is an accent or *point of beginning* and also a *duration of time* which is terminated by the arrival of the next accent. The length of beats, therefore, is conditional on the frequency with which the accents succeed one another. We say "School begins on the *hour* of nine"—meaning a *definite point* in the flight of time,—"and continues for one *hour*," meaning a *duration* of sixty minutes, or until the hour of ten. The time between the occurrence of any two consecutive accents may be divided in the same way that the parts of the hour are marked off on the clock dial.

38. Measures are groups of beats or accents beginning always with a strong one and deriving their distinctive



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character from the varied number and arrangement of the less forceful ones with respect to the initial beat.

NOTE. A composition may begin on any fractional part of a measure, but measures are held always to begin with a strong accent.

39. Accents which go in twos, a strong, alternating with a weak one, make what are called double, or two-beat measures.

40. Accents which go in threes, a strong, followed by two weak ones, make what are called triple, or three-beat measures.

41. Groups of four: strong, weak, medium, weak, make quadruple, or four-beat measures.

42. There are also six-beat, nine-beat, and twelve-beat measures, but the last three varieties are often compounded into two-beat, three-beat, and four-beat measures by bunching the small groups of three accents into single beats.

43. The observant listener will notice that in music the sound is not continuous, but that there are periods of silence during which, however, the impulse to "keep time" is in no wise abated.

These intervals of "Rhythmical Silence" (Mathews) are briefly called Rests.

44. "Musical Utterances" (Mathews) may extend through the time allotted to one, two, three, or any desired number of beats.

45. "Musical Utterances" may also be of such rapidity as to occur oftener than once in the time allotted to one beat.

46. Beats naturally divide into groups of two, four or eight equal and distinct utterances, but modern composers make use of many irregular combinations. (Sec. 37.)

47. The most common of these, three utterances in the time of two, is called a Triplet, and two utterances in the time of three is called a Duolet.



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## CHAPTER THREE.

### The Written Representation of Music. Symbols of Pitch.

48. The Pitch of tones (sec. 6) is represented to the eye by long parallel lines, and the spaces which they make.

49. These long lines and the spaces which they make are called the Staff.

50. The group of eleven lines and twelve equal spaces from which has been evolved our two five-line staves, is called the Great Staff, and probably an average of ninety-nine tones in every hundred used in vocal music can be represented without overstepping its limits.

51. A glance at the Great Staff is sufficient to show the reason for its division. So many lines are confusing to the eye, consequently the sixth line from the bottom was removed leaving two staves of five lines each, and the one line C (or middle C), which was thus left without permanent representation, when wanted is represented by a leger or added line above the bass staff or a leger or added line below the treble staff. (For further information, see Clef in Grove's Dict. of Music.)

52. Commonly when we speak of the staff we refer to one of these five-line portions of the Great Staff.

53. The staff, as we should accustom ourselves to think of it, consists of Five lines and Six equal spaces, but let us understand that it is of variable size and may be enlarged indefinitely, either upward or downward by the addition of *short parallel lines*, sufficient in number to meet the requirements of the pitch which is to be represented.



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These short lines create short spaces and the staff is often temporarily enlarged so as to contain seven lines and eight spaces, nine lines and ten spaces, etc.

54. These lines and spaces, *both long* and *short*, are called Staff-degrees.

55. If any one into whose hands this manual may fall, questions the *six spaces* of the staff, let me quote a perversion of an old saying, "Actions speak louder than definitions," and ask such an one to begin at the third line and write notes downward until he has exhausted the capacity of the five-line staff to represent pitch in that direction. His last note will not be on the first line of the staff but on the space just below it. If he does the same thing going upward from the third line his last note will be on the space above the fifth line. These two extreme spaces are not included in the common definition of the staff but surely they are not *added* spaces for no addition is made to the staff until a short line is placed above or below, and observe that when this is done each short line so added, brings with it a short space outside itself which is available for use at will.

56. The extreme degrees of the staff then are Always Spaces, Never Lines.

57. The lines are always named from the lowest upward, first, second, third, fourth and fifth; and the *spaces*, according to logic and common sense, should be treated in the same way beginning with the one commonly called "space below," calling it "*first*," and numbering them up to the "*sixth*," which is the one commonly called "space above." (Sec. 139.) This excellent suggestion came primarily, so far as I know, from the late Dr. Geo. F. Root about ten years ago, but the only book to promulgate that view since then is, *to the best of my knowledge*, "Primer of Music," by Masón & Mathews, pub. 1894.

NOTE. Where school children have had five or six years' practice



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according to the old naming, a change of this sort may be deemed undesirable inasmuch as the change could not be expected to result in any improvement in reading ability. In such a case we might say, while we recognize the fact that every five-line staff has six spaces we will follow the common method which numbers only those which have lines on both sides. The other two are commonly called "space below the staff" and "space above the staff" and we will retain enough of the common naming so as not to cause comment or confusion, viz., "space above" and "space below." If asked "below what?" we will say "space below the first line," and if asked "above what?" we will say "space above the fifth line."

To say "space below the staff" or "space above the staff" is like saying that the basement of your school building is below the building or that the attic is above the building, whereas both basement and attic are of the building. The position of each in the structure is adequately described as "below the first floor" or "above the second, third, or fourth floor." This, however, is a poor makeshift and is not recommended.

58. As stated in section 6, Pitch has to do with the "highness or lowness" of tones. As stated in section 48, pitch is represented by long parallel lines and the spaces which they make, and to return to section 7, seven of the points of pitch between a tone and its octave (sec. 12) have been given absolute and individual names (secs. 26, 27).

59. The staff is so devised as to represent but eight of the thirteen points of pitch (secs. 15, 17) existing according to our system between a tone and its octave inclusive, and the tones thus represented are those of the major diatonic scale or the regular members of the key family (sec. 19).

60. The bare staff, with no characters of any kind placed upon it, can show differences of pitch only in a general way. The third line represents a higher pitch than the second, the fifth line represents a higher pitch than the fourth, but we have no means of knowing just what pitch or level of tone is represented by any degree—all is en-



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tirely relative. It is for the purpose of making the staff represent in a very definite way the tones of low-pitched instruments and the voices of men, as well as those of high-pitched instruments and the voices of women and children, that characters called clefs are used.

61. A Clef is a character that commissions a staff-degree to represent a certain definite pitch, which being known, enables us to determine just what pitch each other degree represents. Observe that the clef *does not name* the staff-degrees. That ceremony has taken place before the clef appears (sec. 57).

62. Any clef is an officer competent to command the staff, and all clefs deputize the direct command to some one degree; the G clef to the second line; the F clef to the fourth line; the C clef to the first, third, or fourth lines.

NOTE. The C clef has latterly been used by some publishers in designating the *tenor* part in vocal selections, and has been placed upon the fourth space. (Sec. 57.)

63. The G clef alights upon the staff and says to the second line, "You must represent the pitch $\bar{g}$." The F clef alights upon the staff and says to the fourth line, "You must represent the pitch *f*." (Sec. 35.) Knowing the duty which the second line is to perform by order of the G clef, or the duty which the fourth line is to perform by order of the F clef, the duty of every other staff-degree may be determined by reckoning up or down from these lines.

64. Always keep clearly in mind, and never let a class lose sight of the fact that the *sole business* of staff-degrees is to *Represent Pitch*.

65. Owing to the inability of the staff, by reason of its small number of degrees, to represent all the pitches which are likely to be used in any key, certain signs are in use which assist staff-degrees in their business of representing pitch. (Secs. 16, 17, 18, 19, 22, 23.)



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66. First let us understand that a staff-degree while under command of any given clef can, *without assistance*, represent but one pitch, and that the nature of the case which demands representation for thirteen pitches and furnishes but eight degrees with which to represent them, requires that each degree shall, in some way, be made to represent more than one pitch.

NOTE. The condition of staff-degrees when unassisted by sharps, flats, double-sharps or double-flats is designated in these pages as their *Natural Condition*.

67. This demand is met by the characters called sharps, flats, naturals, double-sharps and double-flats. (Secs. 96-99.)

68. A sharp is a character which enables a staff-degree to represent a pitch a half-step higher than it can represent in its natural condition, *i. e.*, the next higher pitch in the series of thirteen. (Secs. 16, 27, 28.)

69. A flat is a character which enables a staff-degree to represent a pitch a half-step lower than it can represent in its natural condition, *i. e.*, the next lower pitch in the series of thirteen. (Secs. 16, 27, 28.)

70. The act of using these characters is called "sharping" and "flatting," and degrees so treated are said to be "sharped" or "flatted."

71. Of the five characters named in section 67, sharps and flats are the only ones used in the key-signature at the *beginning* of a composition, but sometimes, when in the course of a piece the composer wishes to modulate into a key the diatonic tones of which are represented by a smaller number of sharped or flatted degrees, the place of the superfluous sharps or flats is taken by *naturals*. This shows that the degrees which before were sharped or flatted now return to the representation of their natural pitch.

72. In defining the effect of these characters do not say that a sharp raises, or that a flat lowers the pitch of a



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*line* or *space*, or that they raise or lower a *tone*, or that they raise or lower a *note*. Any one of these views necessitates the belief that the new tone represented is a modification of some other tone, and that, for instance, when we sharp the second line, the pitch $\bar{g}$ has in some mysterious way been made over into a new pitch called $\bar{g}$ sharp.

73. The correct view is that the pitch $\bar{g}$ sharp is an independent, individual tone which is co-existent with the pitch $\bar{g}$, but that according to the laws and limitations of pitch *representation*, only one of these tones can occupy the front of the stage at the same time. They may alternate as frequently as the composer wishes, but like the man and woman in a certain kind of barometer, when one is outside the door, the other is just within, ready to come forth at a change of weather, and when the change comes, the first one retires from view.

74. Tones or pitches are *individual* and *immutable*, therefore sharps or flats do not raise or lower them.

75. Notes are characters or signs which are placed upon staff-degrees to call into action the pitch that is wanted at any particular point in a composition. To raise a *note* which occupies a line would be to push it up into the next space, and this is of course, an absurdity.

76. The first statement cited, "a sharp raises the pitch of a line or space," is less objectionable than the others but I would do away entirely with the idea that a sharp *raises anything* or that a flat *lowers anything*. To one who believes in that form of statement I would say: "With the G clef in command what is the 'pitch of the' second line?" to which the answer must be 'G.' This brings us back to the grounds of contention in section 74.

77. The second line referred to above, which naturally *represents* the pitch $\bar{g}$, may by the aid of a sharp be made to *represent* a higher pitch, $\bar{g}$ sharp, or may, by the aid of



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a flat, be made to *represent* a lower pitch, $\bar{g}$ flat, and if we understand the facts as to the division of the octave (secs. 16, 26, 27), no idea of raising or lowering will enter our minds.

78. Another thing "Pitch *of* the Second Line" like the "House *of* Mr. Jones," presupposes proprietorship on the part of the line, whereas we must never lose sight of the fact that the pitch G was in existence many thousands of years before it had a line to represent it, and that the placing of the G clef upon the staff constitutes a formal entrance and occupancy by the *pitch* $\bar{g}$ *as proprietor of* the *second line* instead of *vice-versa.*

79. The staff-degrees are always found at the signature-place in one of three conditions, viz.: Natural, Sharped or Flatted. (Secs. 66, 70, 301.)

## Key of C Major. Staff Representation.

80. When the staff is under command of a clef (it matters not which one) and the degrees are in their *natural condition*, the diatonic tones of the key of C are represented and the staff-position of the key-note may be determined by locating the degree which represents the pitch C. In other words, when a beginning is made upon the pitch C, the staff-degrees are able, unaided, to represent the series of tones required by the formula for the major diatonic scale (secs. 16, 17, 18).

81. The key of C is often called the Natural Key, a designation it gets from the fact that in its staff representation all the *degrees* are in their *natural condition.*

## Staff Representation of Different Keys.

82. When in following the formula given in section 18, any pitch *other than C* is taken as a starting point or key-tone, one or more of the five pitches which the staff degrees unaided cannot represent (secs. 65, 69), have to



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be used. For instance, in building a key with the pitch G as keytone, one of the pitches (F sharp) which in the key of C was a chromatic tone (sharp 4) and therefore without representation, has to be used as a diatonic tone (7). The pitch F, which in the key of C was a diatonic tone (4), exists and appears when wanted in the key of G as a chromatic tone (flat 7).

## Key Signatures.

83. The act of writing a key-signature consists in putting the staff-degrees in condition to represent the tones demanded by the formula in section 18 (Diatonic Tones), when one desires to begin the series on any pitch other than C. The signature should always be re-written at the beginning of each staff.

84. When staff-degrees are thus prepared to represent the tones of any key they may be said to be in their Diatonic Condition.

85. The person who would write music in the key of F must first prepare the staff so that the proper tones may be represented, and to do this the third line must receive the assistance of a flat. Accordingly at the signature place *directly to the right of the clef* he prepares the third line by flatting it, to represent a tone a half-step lower than it can represent in its natural condition, and we would say in answer to the question: "What is the diatonic condition of the third line?" that it is *flatted.*

86. All degrees sharped or flatted at the signature place retain the ability given them by these characters throughout the whole composition unless brought back to their natural condition (sec. 66, note) by the proper sign, the Natural, and the aid imparted to any line or space at the signature place is extended to every eighth degree above or below in the same staff or its added lines and spaces.



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87. A well known work published a few years ago, says: "An F sharp as a signature means that all Fs are to be F sharp, etc." Another important book less than two years old accompanies the signature of three sharps with the following explanatory text:

"F sharp, C sharp and G sharp. Every F, C, and G is sharped." (As if F, C, and G were staff-degrees.) (Secs. 287, 288, 289.)

88. The absurdity of the above seems self-evident.

All pitches are tones. All Fs, Cs, and Gs are never anything but Fs, Cs, and Gs. All F sharps, C sharps, and G sharps are never anything but F sharps, C sharps, and G sharps. We can use the pitches F, C, and G as diatonic or regular members in which case the pitches F sharp, C sharp and G sharp are chromatic or occasional members, or we can use the pitches F sharp, C sharp, or G sharp as diatonic or regular members, in which case the pitches F, C, and G are chromatic or occasional members.

When we wish to use the pitches F sharp, C sharp and G sharp as diatonic tones they must be shown at the signature place, consequently we sharp the fifth line, the fourth space and the sixth space which causes the fifth line, the fourth space and the sixth space to represent respectively F sharp, C sharp, and G sharp (sec. 57).

89. What these authors probably mean is that a sharp or flat which aids a staff-degree at the signature place, extends the same aid to all the octaves (8th degrees) from that degree in every direction.

Thus with one sharp in the signature place on the fifth line two degrees are affected, the fifth line and the second space. (Sec. 57.)

This is quite another matter than to say that "all Fs are F sharp." (Secs. 87, 88.) With four sharps, seven degrees are affected, etc.

90. Children need much practice in defining the dia-



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tonic conditon of staff-degrees (secs. 84, 85), and much practice in preparing the staff-degree to represent the chromatic tones under different signatures.

## Signature Writing.

91. The writing of signatures is easy or difficult according to the way in which it is taught. The memorizing of seven positions for sharps and seven positions for flats is a hopeless task whereas it may be made perfectly easy.

### Writing Signatures Containing Sharps. (Sec. 32.)

92. The first degree to be sharped must be made a matter of memory, and after the sharp has been placed on the fifth line the pupil proceeds according to the following formula: *count down four and up five*, which means: count down four degrees from the fifth line and sharp the fourth space (sec. 57), count up five and sharp the sixth space, down four and sharp the fourth line; then as five degrees upward would bring us to the line above, we count down four again and sharp the third space, after which the formula proceeds regularly until each of the seven degrees which in their *uatural condition* (sec. 96 note) represent the pitches A, B, C, D, E, F, G, have been sharped. The last degree to be sharped represents *ti* or seven of the Major key.

### Writing Signatures Containing Flats. (Sec. 32.)

93. The first degree to be flatted must be made a matter of memory, and after the flat has been placed on the third line the pupil proceeds according to the following formula: *count up four and down five*, which means: count up four degrees and flat the fifth space (sec. 57), count down five and flat the third space, up four and flat the fourth line, down five and flat the second line, etc., until each of the seven degrees which in their natural condition repre-



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sent the pitches A, B, C, D, E, F, G, have been flatted. The last degree to be flatted represents *fa* or four of the major key.

NOTE. The sharps and flats which are used in the signature place, and whose influence is felt throughout the entire movement, are by some theorists called "essentials" as distinguished from "accidentals," a term which is used to describe sharps, flats, naturals, double-sharps, and double-flats, when they appear in preparing degrees to represent the chromatic tones of the key.

94. This matter of representing the "chromatics," when reduced to its lowest terms, consists in knowing how to do three things. First, how to *sharp a staff-degree* from its *diatonic condition*, second, how to *flat a staff-degree from* its *diatonic condition*, and third, how to restore a *staff-degree* to its *diatonic condition* after having sharped or flatted it.

95. When the diatonic condition (secs. 79, 84) of the staff-degrees under any signature is readily recognized, the six following rules will enable one to prepare degrees to represent any chromatic tone with ease and certainty.

96. Rules for representing sharp 1, sharp 2, sharp 4, sharp 5, sharp 6, under all conditions.

1. To sharp a natural degree, use a sharp.
2. " " " sharped " " " double-sharp.
3. " " " flatted " " " natural.

97. Rules for representing flat 7, flat 6, flat 5, flat 3, flat 2, under all conditions.

4. To flat a natural degree, use a flat.
5. " " " flatted " " " double-flat.
6. " " " sharped " " " natural.

98. To represent the diatonic tone after having used a chromatic tone. *Restore the staff-degree to its condition as found at the signature place.* It matters not what sign you have used; if the degree was in its natural condition at the signature place, use a natural; if it was sharped use a sharp; if it was flatted use a flat; that is all.



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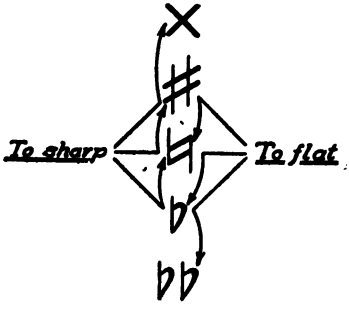
NOTE. Many books direct that in restoring a degree to its diatonic condition after having used a double-sharp or a double-flat, the degree should first be made natural and then sharped or flatted as the case demands, but here, as in other cases, the best usage governs.

99. The accompanying diagram is useful as an assistance in learning the rules, and is a good reminder for any one whose use of accidentals is only occasional.




**Directions.**

Place pointer on "To sharp" or "To flat" as the case requires. Slide it along the straight line leading to the character which describes the diatonic condition of the staff-degree in question, then follow the curved line to the dart which indicates the proper sign to use.

Suppose the problem is to flat a sharped degree. Start at "To flat" and follow the straight line obliquely upward to the left until it points to the sharp, then follow the curved line downward to the dart which points to the natural as the proper sign.



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## CHAPTER FOUR.

### The written representation of Music. Characters used to express Duration.

100. Duration, or the length of sounds or silences, is represented by Notes and Rests, together with their modifying symbols.

There are six varieties of these notes and rests more or less commonly used in vocal music.

| | |
|---|---|
| Whole-note. | Whole-rest. |
| Half-note. | Half-rest. |
| Quarter-note. | Quarter-rest. |
| Eighth-note. | Eighth-rest. |
| Sixteenth-note. | Sixteenth-rest. |
| Thirty-second-note. | Thirty-second-rest. |

101. Notes consist of one, two, or three parts: the head, the stem, and one or more hooks or cross-strokes the latter of which are sometimes used to connect groups of two, three, four or more notes of the same denomination. Thus eighth-notes, which commonly have one hook, are frequently grouped as above and all the stems connected by *one* cross-stroke. Sixteenth-notes, which commonly have two hooks, are frequently grouped and connected by *two* cross-strokes.

Notes of different denominations, like eighths and sixteenths, etc., are often similarly grouped.

102. The value of notes above the denomination of quarters is known by the number of their hooks, whether each hook is separate or is drawn across several stems at once.



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103. A note stem may turn either up or down. When the stem points upward it must spring from the right-hand side of the note-head, and when the stem points downward it must spring from the left-hand side of the note-head; but whether the stem points upward or downward, the hooks if any, are always on the right-hand side of the stem.

104. Certain rules govern the placing of notes upon the staff.

When a melody in one part is being written, the stem of the note-head upon the third line may go either up or down.

When the note-head is below the third line, the stem must go up.

When the note-head is above the third line the stem must go down.

105. Often two-part music is written on a single staff and frequently the stems of the notes representing the higher part *all go upward* while the stems of the notes representing the lower part *all go downward.* In such a case the rules in the preceding section are annulled.

106. Notes when used in connection with staff-degrees *indicate* musical utterances.

107. Staff-degrees *represent* pitch (sec. 58). When the staff is properly prepared with G clef and a signature of four sharps, the diatonic tones of the key of E are *represented* but no particular tone is *indicated* or called for.

108. A half-note alighting with its head upon the third line, calls into action the pitch $\bar{b}$, and by its distinctive shape, *indicates* the number of beats or parts of beats that this pitch is to remain in action.

It will be seen that the *note-head* is the important part of the note so far as it serves as an *indicator* of pitch, but that in determining its duration (except in the case of a whole note) the stem, or stem and hooks, must be considered.



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For dots, staccato marks, ties, slurs, holds, syncopation, triplet, etc., see sections 269-284.

## Material Authorized by the School Board

for use in the study of vocal music in the public schools of the city of Worcester.

The Natural Series of charts and music-readers.

The Worcester Rectangle of Modulation.

Weaver's Individual Singing Exercises.

Various *desk-books* for use in the teaching of rote-songs in primary grades.

The Euterpean, High Schools.

The Worcester Music Manual.

The Worcester Music-Writing Blocks.



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## CHAPTER FIVE.

### Rote Singing.

109. Rote singing skilfully conducted has a well-recognized æsthetic value in the education of the pupil in the common schools.

Children who are well drilled in the singing of songs by rote, gain unconsciously from the imitation of good models, the power to feel, to know, and to exemplify, as follows:

To feel rhythm and exemplify it in song.

To know good tone and exemplify it in song.

Teachers should always remember that in schools where rote-singing is used as a "*stop-gap*" and is allowed to drift on without a pilot, tone judgment is pretty sure to be lost, and rhythm-sense debauched.

I have realized between the singing of a given song by two different schools of the same grade, a gulf as wide as that which separated Lazarus and Dives. It could be accounted for neither by the difference in the ability of the children nor of the teachers, but was probably due to different notions held by the two teachers regarding the utility of rote-singing.

To have the children engage in a song that the teacher may be free to do something else, is to aid and abet the class in a murderous assault on the said song, a misdemeanor for which there should be a prescribed penalty. If the register or any other matter requires the teacher's personal attention, let the children whisper, talk aloud or play tag—all *comparatively harmless* diversions, but in the name of St. Cecilia, please give the rote-singing the same undivided attention that we all realize to be necessary for successful oral number work.



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# CHAPTER SIX.

## Tune.

"Where there is no vision, the people perish:" Proverbs XXIX, 18.

Where there is no song-singing, the interest in music-study languishes.

Agricultural operations without water are failures. The farmer loosens the soil with spade, shapes it with hoe and stirs it with rake, and the mass which with proper moisture would cohere and yield good returns, lacking it, disintegrates and blows away as dust.

There are certain necessary operations to be conducted in our musical field, not the least important of which is frequent irrigation from the River of Song.

The ensuing pages are filled with details, the following of which leads continually to higher altitudes. Do not keep your eyes fixed on the details of the road all the time. Each point mastered brings to you an altitude where a broader view unfolds.

Here lay aside petty detail! Raise your head! Rest a moment from the toils of the ascent and look about you! Sing a song! For "Where there is no vision, the people perish."

The apostle Paul, speaking of the church at Corinth, says: "I have planted, Apollos watered; but God gave the increase."

The last clause is not intended to exonerate the planter or the waterer in case of failure in the increase, for he presently says: "And every man shall receive his own reward *according to his own labour*."

### First Steps in the Formal Presentation of the Subject.

110. A considerable amount of vocal facility and control having been gained through the singing of rote-songs including some scale-songs, the teacher will sing by syllable very slowly down and up the major scale several times, using a soft musical tone. After a time allow children to accompany very softly both collectively and individually. As soon as possible have pupils sing down and up alone.



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111. Pupils from the first should practice matching tones either from the teacher's voice, the chromatic pitch-pipe or the piano.

Interest in this may be stimulated by having some musical child furnish the tone models for other children to match.

112. When the singing of the scale is felt to be well in hand use the left-hand column of numerals from the *Rectangle of Modulation*, or if preferable write it with chalk on the black-board.

113. Ask pupils to sing down the scale and accompany them by *sliding* the pointer smoothly from numeral to numeral instead of *tapping* or *stopping* at any point, using care that the pointer shall be over the corresponding numeral as each syllable is sung.

In this way the association is made and the children learn that 1 is do, 3 is mi, 6 is la, etc.

114. The important things:

SLIDE THE POINTER.

USE THE PITCH-PIPE.

VARY THE TEMPO CONSTANTLY.

USE THE SYLLABLES, THE HUM, AND DIFFERENT VOWEL TONES IN SUCCESSION.

NEVER LOSE SIGHT OF THE INDIVIDUAL.

ALTERNATE CLASS WORK AND INDIVIDUAL WORK.

Organize for this individual work so that at the beginning of each lesson two pupils will stand. When one pupil sits after singing, another rises. In this way two pupils are constantly on their feet in readiness to sing at a nod from the teacher. The rising and sitting of the individual should be promptly done while the class is singing its exercise. Much better work can be done in this drill work by taking it in two four-minute periods, one in the forenoon and one in the afternoon. With four minutes of good vigorous attentive work, more will be accom-



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plished than in fifteen minutes with indifferent attention. Do not be too insistent on these points of drill *at any one time*. The best teacher will shift ground rather than lose the interest of her class.

Develop each point slowly at first, then work for a high rate of speed.

I.

### Teaching Obedience to the Pointer.

115. Move pointer down or up from *do* a part of the way slowly and the remainder at a quicker pace. Change the tempo or speed at a different point each time.

II.

### Prolonging Tones.

116. Move pointer down or up from *do*, arrest progress at some point where the tone is to be prolonged, then finish singing the scale in the same direction. Give many exercises like the following, prolonging a different tone each time, and each time varying the length of the tone which is dwelt upon:

do re mi——fa sol la ti do.
do ti la sol——fa mi re do, etc.

III.

### Repeating Tones.

117. Move pointer down or up from *do*, arrest progress at some point; prolong, and repeat the tone one or more times, then finish singing the scale in the same direction. Give many exercises like the following, stopping at a different tone each time and varying the number of repetitions:

do re mi fa sol la——la——la ti do.
do ti la sol fa——fa——fa——fa mi re do, etc.



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As ability is developed, stop, in passing down or up, on several different tones.

IV.

### Turning about after Repeating Tones.

118. Move pointer down or up from *do;* prolong, and repeat a tone, then return whence you came, *i. e.*, let the exercise begin and end at the same point. Give many exercises like following, guiding the children very slowly and carefully at the turning-point:

do ti la——la——la ti do, etc.

do re mi fa sol——sol——sol fa mi re do, etc.

V.

### Prolonging and Turning about without Repeating.

119. Move pointer down or up from *do*, prolong a tone and, *without repeating*, return whence you came. Give many exercises like the following:

do ti la sol——la ti do. do re mi——re do, etc.

VI.

### Turning without Prolongation or Repetition.

120. Move pointer down or up from *do* and retrace to the point of beginning without prolonging the pivot-tone:

do ti la sol la ti do. do re mi fa mi re do, etc.

VII.

### Turning at Two or More Points in an Exercise.

121. do ti la sol la sol fa mi re mi fa mi re do, etc.

### Rectangle of Modulation. (See Chart.)

122. The ideas mostly from Twichell's "First Drill Form" and Russell's "Triangles of Modulation," done into chart-form and connected with the staff by C. I. Rice.



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| | |
|---|---|
| 8 7 6 5 4 3 2 1 | Each numeral in a *vertical* series represents a different pitch. |
| 7 6 5 4 3 2 1 7 | |
| 6 5 4 3 2 1 7 6 | |
| 5 4 3 2 1 7 6 5 | Each numeral in a *horizontal* series represents the same pitch. |
| 4 3 2 1 7 6 5 4 | |
| 3 2 1 7 6 5 4 3 | |
| 2 1 7 6 5 4 3 2 | Use syllables, the hum and the vowel tones. |
| 1 7 6 5 4 3 2 1 | |

## Working from Right to Left, Entering the New Key through the Tonic.

123. Trace an exercise with several turns as given under Point VII using the last column of the Rectangle and stopping finally on "7" (ti). Now move the pointer to the left, pupils meanwhile sustaining the tone and changing to *do* when the pointer rests on "1" of the seventh column, and trace down and up as before. Stop on "7" in this column, move the pointer to the left, pupils meanwhile sustaining the tone and changing to *do* when the pointer rests on "1" of the sixth column. Repeat this process until you reach the left hand column. In doing this, do not go above the "1" in any column.

Children will at first experience difficulty in holding the pitch and changing from *ti* to *do;* and it is recommended that the pointer be passed over from 7 to 3 and several other numerals on the same *line*. *Ti* sounds like *mi*, and the effect of the tone as seven of the key must be destroyed or the voices will go up when the pointer moves from 7 to 1.

## Working from Left to Right, Entering the New Key through the Tonic.

124. Trace an exercise with several turns as given under Point VII, using the first column of the Rectangle



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and stopping finally on "2" (re). Now move the pointer to the right, pupils meanwhile sustaining the tone and changing to *do* when the pointer rests on "1" of the second column, and trace up and down as before. Stop on "2" in this column, move the pointer to the right, pupils meanwhile sustaining the tone, and changing to *do* when the pointer rests on "1" of the third column. Repeat this process until you reach the right-hand column. In doing this work do not go below the "1" in any column.

125 These two items of drill are to be carried on together, and when the rectangle has been conquered piecemeal by the use of the two triangles which are divided by the oblique line of "1s" the children are ready to use the Rectangle as a whole, singing from top to bottom of each column. They may need a little help at first in crossing up or down over the tonic (sec. 23), but freedom in this respect will soon come, and the sooner the children become familiar with singing the tonic as a central tone and expert in passing smoothly up or down over it, the better it will be for them.

126. Changes of key are now to be freely made by stopping on 2, 3, 4, 5, 6, 7, of any *column*, and sliding the pointer along horizontally to the right or left, pupils meanwhile sustaining the tone and changing it to *do* when the pointer rests on "1." Arrived in a new column the pointer should be passed up or down, turning in various places, repeating tones, varying the tempo, and constantly working for high speed.

## Comparing the Diatonic Half-Steps in Major Keys.

127. After speeding in first column, stop on 3 and trace 3 4 3 4 3. Then slide the pointer horizontally to the only equivalent step, fourth column 7 1 7. Alternate first col. 3 4 3, fourth col. 7 1 7, then speed up and down the fourth col., finally stopping on 3 and tracing 3 4 3 4 3.



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Slide the pointer horizontally to 7 1 7 in the seventh col., alternating 3 4 3 and 7 1 7 as before. Persist until you arrive in the right-hand col.

Reverse the order, stopping at 8 7 8, col. one, and passing the pointer to 4 3 4, col. five. Speed down and up col. five, repeating 1 7 1 7 1, and pass the pointer to 4 3 4, col. two, etc.

### Comparing the Diatonic Whole-Steps in Major Keys.

128. Stop at any numeral in a col. where the next higher tone in the vertical series is a whole-step removed, and skip about on the *horizontal series*, singing a diatonic step upward from all numerals except 3 and 7, from both of which the upward step is a half-step.

Reverse the order, stopping at a point where the next lower tone in the vertical series is a whole-step removed, and skip about on the *horizontal series*, singing a diatonic step downward from all numerals except 8, 1 or 4, from each of which the downward step is a half-step.

### Comparing the Diatonic Half-steps with the Diatonic Whole-steps in Major Keys.

129. Column one, 3 4 3, col. six, 5 6 5, col. eight, 3 4 3, col. three, 1 2 1, col. five, 6 7 6, col. one, 3 4 3, col. two, 2 3 2, col. seven, 4 5 4, col. four, 7 1 7, etc.

### Entering New Keys at Points other than the Tonic. (Sec. 23.)

130. Speed up and down and stop on some tone in the series which has a whole-step above and below, and slide pointer horizontally to some numeral which occupies an equivalent position.

For instance, stopping on 5 we are at a point in the vertical series where there is a whole-step upward, 5 6, and a whole-step downward, 5 4. Slide along horizontally to 2 and the conditions are identical; whole-step up-



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ward, 2 3, whole-step downward, 2 1. Speed up and down the new column, stop on 5, slide horizontally to 2. Repeat in each column until change is easily made. Change as follows:

Speed up and down column, stop on 6. Enter new key on 2. Speed up and down and repeat the process, stopping in column on 6, and sliding on line to 2.

| | | | | | |
|---|---|---|---|---|---|
| Stop in | column on | 2, | enter new | key on | 5. |
| " | " | 6, | " | " | 2. |
| " | " | 2, | " | " | 6. |
| " | " | 5, | " | " | 2. |
| " | " | 6, | " | " | 5. |
| " | " | 5, | " | " | 6. |
| " | " | 7, | " | " | 3. |
| " | " | 3, | " | " | 7. |
| " | " | 4, | " | " | 1. |
| " | " | 1, | " | " | 4. |

It will be apparent to all, that in choosing a point of entrance into a new key, those points will be easiest, and should be first attacked, which require no change of neighboring step-relations.

## Establishing the Different Diatonic Key-relations of a Given Pitch.

131. Sound the pitch-pipe C, D, E flat or E, and lead the children to regard its tone as an entirely unrelated sound. Tell them it is not "*do*" or "*sol*," or any of those syllables, but simply the tone or voice of the pitch-pipe. Do not allow them to sing; have them listen carefully and await your orders, which you will give with the pointer.

After pupils have listened a moment put pointer on 5 of the topmost line of numerals, have them think and sing the tone as 5 of a key, and lead them down to the tonic. (Sec. 23.) Sound the pitch-pipe again, tell pupils



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that its tone is no longer sol, but simply the tone of the pitch-pipe. After a moment put pointer on 3 of the topmost line of numerals, have pupils think and sing the tone as 3 of a key, and lead them down to the tonic.

Point in this way successively at 5, 3, 7, 2, 6, 8, and 4 on the topmost line of the Rectangle, calling attention by repeating the last two to the fact that *do*, *ti*, *la*, *sol*, and *fa*, *mi*, *re*, *do*, sound alike.

## Dividing the Rectangle of Modulation.

132. As a final step in the use of the Rectangle of Modulation for practicing diatonic progressions, divide it into two triangles following the oblique line of 1's leading from the lower left-hand corner to the upper right-hand corner.

## The Upper Left-hand Triangle.

133. Ignore the numerals below the 1's.

Sound pitch C, D or E.

Guide pupils down the first column from 8 to 1, returning to the original pitch by a jump.

NOTE. — If serious difficulty is found in returning to the upper or lower tones by a jump, the class may for a time sing back tone by tone.

Slide pointer slowly to the right, pupils retaining the pitch but changing the syllable as pointer reaches 7, col. two. Assist children in holding the pitch if necessary by sounding the pitch-pipe as the syllable is changed. Guide pupils down from 7 to 1 in the second column, returning to the uppermost tone by a jump.

Slide pointer slowly to the right, pupils retaining the pitch but changing the syllable as pointer reaches 6, of col. three. The process is repeated until pupils have sung across from the left-hand to the right-hand column. This will shortly be done by the class without deviation



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from the pitch. Sound the pitch-pipe at the beginning and the end of the exercise.

### The Lower Right-hand Triangle.

134. Ignore the numerals above the 1's. Sound pitch C, D or E.

Guide pupils down and up the eighth column, returning to the lowest tone by a jump.

Slide pointer slowly to the left, pupils retaining the pitch but changing the syllable as pointer reaches 2 of column seven. Guide pupils up from 2 to 1 in the seventh column, returning to the lowest tone by a jump. Slide pointer slowly to the left, pupils retaining the pitch but changing the syllable as pointer reaches 3 of column six. The process is repeated until pupils have sung across from the right-hand to the left-hand column. Then guide class up to 8, and test for pitch.

### Object of Drill Work.

135. The object of all the preceding work is to give pupils the power to establish themselves quickly in all diatonic key-relations, so that figuratively we can throw them into the series at any point, with the absolute certainty that they will be able to find their way rapidly and accurately to the key-tone.

### Lessons on the Staff-Degrees.

136. In the meantime a little judicious work may be done by calling attention, on the Rectangle of Modulation Chart, to the lines and spaces, making sure that the children know the difference between a line and a space. Have individuals point out all the spaces, including the lowest and highest. Have individuals point out and *name* all the lines, first, second, third, fourth and fifth, and if, from the first they are led to know that the space commonly called "space below," is just as good and useful as



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the first *enclosed* space, I will trust any first grade child to name the spaces, "first, second, third, fourth, fifth and sixth." (Secs. 219–225, 286.)

137. If the children do this—and they will—don't try to befog their clear minds by trotting out that wrinkled composite incarnation of Methuselah and Ananias, the hoary-headed definition of the staff and the naming of its spaces.

The element of age in an erroneous statement arouses no feeling of reverence in my mind, so in the face of the usage of centuries, I say: Away with this definition of the "Five line and four space" staff, and, as we all *use*, so let us henceforward *acknowledge*, a five line and *six space staff*. (Sec. 57.)

138. It is with the idea of giving distinction to the first space of the staff that the lower line of numerals on the Rectangle of Modulation Chart, occupies this space instead of the line below, or the first line.

## Interval Work from the Rectangle of Modulation.

139. Develop all intervals from the above-mentioned chart in the following way: Emphasize one of the extreme tones of the interval by pointing two or three repetitions, then slide rapidly over the intervening tones, (children singing them lightly) to the other extreme, which is impressed by repetition.

Repeat this process until the outer tones are heard with sufficient clearness so that they can be sung omitting the intervening tones. Immediately on getting the interval make sure by pointing upward and downward diatonically from the outer tones of the interval, that it is properly established in the key. After a little practice in one column, take the interval successively in each of the other columns thus practicing it at all the different altitudes possible.



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In this way children learn to know and sing the interval at any pitch. Develop and relate each interval with the *diatonic* tones of the key before establishing any relations between other intervals.

Frequently slide the pointer horizontally to the left on a line or space and let pupils do some work on the bare staff-degrees in the open space at the left of the rectangle of numerals. *This is important.*

## Twichell's Second and Third Drill Forms.

140. I am indebted to Mr. W. Seymour Twichell, of Paterson, N. J., for permission to incorporate in this manual the devices for giving drill-work upon the staff, which he calls "The Second and Third Drill Forms." A working knowledge of these Forms is an invaluable addition to the equipment of any teacher.

The value of the Second Drill Form lies in the great amount of drill in different staff-positions which can be given in an incredibly short time, and in its adaptability to the needs of different grades. Most devices of this nature are applicable to one or two grades at the most, but this is equally valuable at almost any stage of the work, for with it we can give our classes just what they need at any point. *So far as I am aware*, the idea of doing staff work in this manner was original with Mr. Twichell, and I take pleasure in giving honor to whom honor is due.

Space will not allow the introduction verbatim of Mr. Twichell's exposition of his plan which can be obtained elsewhere. I will give enough here to serve as a reminder when in doubt on any point.

141. Children have become familiar through practice from the "Rectangle of Modulation" Chart with the appearance of the lines and spaces which they have named "first, second, third, etc.," so that we are now ready to



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draw a long staff upon the board (omit clef), and tell them that the lines and spaces stand for tones. (Sec. 219.)

I would say: "Children, these lines and spaces stand for tones," and running my finger up across the staff, would tell them: "Each line or space my finger touches stands for a higher tone," and passing my finger downward I would say: "Each line or space my finger touches going this way stands for a lower tone." (Secs. 48, 49.)

## The Second Drill Form.

### TURNING ABOVE DO.

142. Going to the right-hand end of the staff I would begin about ten inches from the end, and talking to the class as follows would write a whole-note on the third line.

"Now when I want to hear the tone that the third line stands for I put a note on it."

Then writing another note to the right on the next higher space: "I write a note on this space because I want you to give me the tone that it stands for."

Then writing another note to the right on the third line, say: "Now you see I want the tone that this line stands for again."

With pointer on the left-hand note, say: "The tone that this line stands for is *do;*" then sliding pointer to the second note, say: "This space stands for a higher tone." Call on some pupils to tell the next tone above *do*, and in case of failure refer back to the Rectangle of Modulation.

143. Now give pitch B flat, and trace the exercise very slowly from left to right, class singing syllables. The teacher must understand that the difficulty lies in getting the children to make the turn correctly, and must use the pointer with skill. Let it rest on *re* a moment before coming back to *do*, and do not sing the exercise for them. Rather than do this, trace it for the class to sing



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from the Rectangle and immediately connect it with the staff, thus: Rectangle 1 2 1; Staff 3rd line, 4th space, 3rd line. (Sec. 57, 136, 222.)

144. Now *prefix* a note which you place on the next lower staff-degree saying as you write it: "This space stands for a lower tone. The tone which this line stands for is *do*" (giving the pitch just sung) "this space stands for *do*" (sliding the voice downward to the new pitch as nearly as you can judge).

145. It is more desirable that the *approximate* pitch be given *off-hand*, thereby keeping before the class constantly the functions of lines and spaces as representers of pitch, than to sound the pitch-pipe and give the exact tone, for the relation of the neighboring degrees is apt, in this way, to be lost.

146. This exercise sung from the new pitch is *do re mi re* and the power necessary for its correct rendering is the ability to turn at *mi* and start back toward the tonic.

147. Another note placed to the left of the others on the second line, the teacher going through the same incidental talk about what the lines and spaces stand for, and changing the pitch as before, gives an entirely new exercise: *do re mi fa mi.*

Power required—the ability to turn at *fa* and start back toward the tonic. (Sec. 23.)

148. If an exercise is sung correctly never repeat it; but if failure results I would advise prefixing a note *on the same degree*, saying: "I want to hear the tone that this degree stands for again, so I call for it by putting on another note."

149. Repeated notes must frequently be used anyway as a matter of necessary practice.

150. Continuing thus to *prefix* a new note on the next lower degree and call it *do*, the exercise is gradually lengthened, a different staff position is presented to the



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eye each time, and each time the turning-point comes at a different place in the key, while incidentally the children are learning in a very definite way the functions of staff-degrees (sec. 64), and those of notes (secs. 257-261), which will forearm them against the indiscriminate use of *note* and *tone* as words of equivalent meaning.

TURNING BELOW DO.

151. Place on the right-hand end of a long staff four notes to call for the syllables *do ti la ti*. Have them on the lower part of the staff. Incidental talk as given in the last section should accompany all this work.

When exercise is correctly sung *prefix* a new note on the next *higher* degree, connecting the tones as before. When sung this exercise should be, *do ti la sol la*. Power required—the ability to sing down from *do*, to turn at *sol* and start back toward the tonic.

152. The exercise is gradually lengthened in the same way as detailed in the last section only the prefixed note is each time on the next higher degree.

Use the repeated notes constantly.

## Intervals on Second Drill Form.

EXERCISES CONTAINING ONE SKIP OF THE THIRD.

(*Previously practiced from the Rectangle of Modulation.*)

153. Place on the right-hand end of a long staff, beginning on the third line a succession of notes calling for the following, *do re mi do*, saying, "I want to hear the tones that these lines and spaces stand for so I am putting these notes upon them. I want the tones that this line, (pointing) this space, and this line stand for, and since I do not want to hear the tone that this space stands for, I put no note on it. I skip it and put my note on the line."

"Now when you sing it you must give me just what I



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wish to hear. When the tones that two lines stand for are sung, skipping the tone represented by the space we call it the skip of a third." What is the third tone below *mi*? Very good, now we will sing it.

154. Prefix a note placing it on the next degree lower, saying: "This space stands for a lower tone. The tone which this line stands for is *do*" (giving the pitch just sung), "this space stands for *do*" (sliding the voice downward to the new pitch.)

Persist in prefixing notes until the added line below is reached, and your class will have sung all the thirds which can be formed from the diatonic tones of the key.

155. Place on the lower part of the staff a short succession of notes calling for the skip of a third. Proceed as before prefixing notes which are to be placed on a higher degree each time.

### Exercises Containing more than One Third.

156. Start out with a turn of notes containing a third and proceed as before, but with this difference: "the prefixed note must be a third higher or lower than the first note of the preceding exercise.

In this work thirds and seconds must be freely intermingled. Long successions of seconds or thirds used exclusively encourage relaxed attention, and the children must be kept on the alert.

### Miscellanous Intervals.

157. As fast as thirds, fourths, fifths, etc. are added to the working capital of the class by practice from the "Rectangle," they should be taken up in connection with Twichell's Second Drill Form in the same manner as outlined for seconds and thirds, the unique thing about this Form being the change of staff position which results



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from enlarging the exercise by PREFIXION instead of SUFFIXION, and calling the initial tone *do*.

### Variations in use of Second Drill Form.

158. Very valuable work may be done by saying at the beginning of the drill period: "Now, this morning, in using the Second D. F., we will call the first note of each exercise *mi*, or *sol*, or *re*, or *la*," or any diatonic tone of the key that you choose.

THE HARMONIC ELEMENTS ARE ALL-IMPORTANT.

The primary triads, Tonic, Dominant and Subdominant, may almost be trusted to care for themselves, for they must of necessity form a part of every song and exercise sung by the children.

THE ESSENTIAL DIFFERENCE between music that is commonplace and that which is really good, must be sought at the HARMONIC FOUNDATION.

Broadly speaking, after the enumeration of these primary triads comes the dividing line between the commonplace which goes little farther, and the really good which employs all possible diatonic and chromatic harmonies. The teacher who understands the principle of giving interval work on the second D. F. has power at her command which properly directed will yield great results.

*Re* as an initial syllable to a succession of thirds in today's lesson gives power over the triad, chord of the seventh, chord of the ninth and of the eleventh, if you please, of the supertonic.

*La* and *Mi* as initial syllables to-morrow and the next day give the same practice on the harmonic elements which combine to make the same chords founded on the Submediant and Mediant. One who has traveled the common rut vainly expecting the children to get dominion over these secondary triads by means of diligent practice on *do mi sol*, *fa la do* or *sol ti re* will be surprised at the



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immediate gain which will come from following these directions.

## Chromatic Work. (Sharps.)

159. Starting on any line or space, write on the extreme right of a long staff, whole notes to call for the following: *do mi ri mi.* Prefix notes, calling the left-hand one *do* each time, but avoid calling for the degree *below the one* the original exercise starts on, or the degree originally sung to the syllable *mi.*

If the original exercise began on the third line, have no exercise begin on the space next below it or on the fourth line. Thus, when the next degree up or down is either one of these degrees, we must either prefix *two* notes diatonically or put in the *skip of a third.*

160. The principle to follow in avoiding the use of certain staff-degrees as starting points for an exercise with sharps is this: *Avoid such degrees as will oblige you to call the sharped degree either mi* or *ti.*

### SHARPS APPROACHED FROM ABOVE.

161. I. Down a half-step and back, expressed on the staff by noting a natural degree (*i. e.* putting a note upon it) sharping the next lower degree and noting it, and again noting the first degree, sol fi sol. re di re. la si la. mi ri mi. ti li ti.

### SHARPS APPROACHED FROM BELOW.

II. Two half-steps upward in succession, expressed on the staff by noting a natural degree, by sharping the same degree and noting it, and noting the next higher degree, do di re. fa fi sol. la li ti. re ri mi. sol si la.

## Chromatic Work. (Flats.)

162. The flats are worked the same as the sharps, so a detailed description will be unnecessary. Avoid such



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degrees as will oblige you to call the Flatted degree either *fa* or *do*.

FLATS APPROACHED FROM BELOW.

I. Up a half-step and back, expressed on the staff by noting a natural degree, by flatting the next higher degree and noting it, and again noting the first degree, la te la. do ra do. sol le sol. re me re. fa se fa. (Sec. 240, 241.)

FLATS APPROACHED FROM ABOVE.

II. Two half-steps downward in succession, expressed on the staff by noting a natural degree, by flatting the same degree and noting it, and noting the next lower degree, ti te la. mi me re. la le sol. re ra do. sol se fa.

## Chromatic Tones or Occasional Members of the Key Family.

163. The use of chromatic tones in combination with diatonic tones in exercises without skips calls for the successful teaching of two things.

First: Your pupils must be given the ability to sing *up* a half-step, or *down* a half-step from any given pitch.

Second: Your pupils must be given the ability to sing *up* a whole-step, or *down* a whole-step from any given pitch.

In other words, new vocal stepping-places must be grafted into the diatonic key material with which the children have become so familiar through their practice on the Rectangle.

This step has been prepared for in the drill-work described under sections 127-129, and is introduced according to the formula given in the Natural Chart Series C, and the Natural Primer, Part II; in fact the material of the Natural Music Course is authorized and used in the Worcester schools, and no part of that course is abrogated by the contents of this *Manual*.



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164. Sharps approached from above call for the singing of a half-step downward where a whole-step is to be expected. Do ti do, is the succession of syllables used to fix this step at first, and the tune having been caught, the equivalent syllables, *sol fi sol; re di re; la si la; mi ri mi; ti li ti* may be substituted.

### Staff Work. (Sharp Chromatics.)

165. Put upon the staff the major scale in the key of D, E flat, or E, written in *whole-notes*, and so spaced from left to right as to leave room for the introduction of the characters which call for the Chromatic Tones. Prepare the proper degree to represent sharp four, and write directly after the sharp or natural, a *closed* note-head.

### Introducing an Occasional Member to the Regular Members.

166. A reception in honor of *Fi* with *Sol* as master of ceremonies. Sharp four (fi), the occasional member who comes into the series as a stranger must be introduced to each of the regular members in turn. Impress the tones *fi sol* .strongly by repetition, sol—fi sol—fi sol, etc. fi sol la. fi sol la ti. fi sol la ti do. (8). fi sol. do (1) fi sol. do re—fi sol. do re mi—fi sol. do re mi fa—fi sol. do re mi fa fi sol. Repeat fa fi sol and use it as a starting point for a new exercise.

167. The receiving party now consists of three members, fa fi and sol, two old acquaintances and a stranger, thus: fa fi sol la. fa fi sol la ti. fa fi sol la ti do. mi fa fi sol. re mi fa fi sol. do re mi fa fi sol.

168. Organize a receiving party to consist of mi fi sol and work as before, mi fi sol—. mi fi sol la—. mi fi sol la ti—. mi fi sol la ti do. (8) do (1) mi fi sol. do re—mi fi sol do. (8)

169. The last receiving party will be sol fi fa mi, after



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which *fi* should be established on a good basis of social equality with the Regular Members.

170. When *fi* has thus been approached from each of the Regular Members, (diatonic tones) the *other* occasional members (chromatic tones) must be introduced all around in the same manner and in this order:

Sharp one (di) re di re. do di re.

Sharp five (si) la si la. sol si la.

Sharp two (ri) mi ri mi. re ri mi.

Sharp six (li) ti li ti. la li ti.

Represent only one Chromatic Tone in the series at a time.

171. Flats approached from below call for the singing of a half-step upward where a whole-step is to be expected. mi fa mi is the succession of syllables used to fix this step at first, and the tune having been caught, the equivalent syllables la te la; do ra do; sol le sol; re me re; fa se fa; may be substituted.

### **Staff Work.** (Flat Chromatics.)

172. Prepare staff by writing major scale downward, spacing the same as for practice on the sharp chromatics. Prepare the proper degree to represent flat seven, and write directly after the flat or natural, a *closed* note-head.

### Introducing an Occasional Member to the Regular Members.

173. A reception in honor of *Te*, with *La* as master of ceremonies.

la—te la—te la. sol—te la. sol fa—te la. sol fa mi—te la. sol fa mi re—te la. sol fa mi re do—te la sol fa mi re do. do (8) te la. do ti—te la. sol—do ti te la. fa—do ti te la. mi—do ti te la. re—do ti te la. do (1) do (8) ti te la ti do.



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174. Introduce the other flat members to the regular members in the same way as outlined above.

## Singing intervals between the Chromatic Tones and the Diatonic Tones.

175. When the above exercises can be well done, the work is gradually extended to include thirds, fourths, and eventually all the intervals possible in skipping from a Chromatic Tone to a Diatonic Tone and back.

176. Finally the drill must include intervals between two Chromatic Tones.



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## CHAPTER SEVEN.

## TIME.

### Note Values from Twichell's Third Drill Form.

177 Draw a long staff and upon it at the beginning place a "2" for the lower numeral of a meter-signature. Proceed as in the Second Drill Form, using half-notes and half -rests (beat notes and rests). The next day place a "4" at the beginning of the staff, and use quarter-notes and quarter-rests (beat notes and rests). The next day place an "8" at the beginning of the staff, and use eighth-notes and eighth-rests (beat notes and rests). When pupils have become intelligent in the use of these different symbols, introduce the two-beat note and rest, the three- and four-beat notes and rests. Have children push the second, third and fourth beats. In grammar grades where time problems are more complicated this Form is equally useful.

### Teaching Rhythm and its Representation.

178. The points to be mastered under this head are few in number and easily overcome if attacked earnestly by a teacher who is skilful and vigorous and has the ability to concentrate and hold the attention of her class.

Briefly stated they are these:

179. First: Learning to awaken the feeling for the different varieties of measure through a repetition of the group of accents of which the measure is composed. (Secs. 36-42). Use words like "loud, soft," or "strong, weak," in this connection, primary pupils standing in aisles and *marking time* with feet like a military company.



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180. Second: Learning to give "musical utterances" of various lengths and to recognize the notes which represent them as follows:

1. One utterance in each beat.
2. One utterance extending through two or more beats.
3. Two utterances of equal length in each beat.
4. Utterances one-and-a-half beats long.
5. Four utterances of equal length in each beat.
6. Three utterances, one long and two short in each beat.
7. Three utterances, two short and one long in each beat.
8. Three utterances of equal length in each beat.
9. Two utterances of unequal length in each beat.

181. (1) The ability to interpret one-beat notes is developed by the repetition of a one-syllable word, as "*school*, school, *school*," etc.

182. (2) In the two-beat notes this one-syllable word is prolonged "schoo—ool," and the children are told to *think twice*, or to push the second beat while singing a two-beat note.

183. (3) The ability to interpret groups of two notes of equal value in one beat is developed by the repetition of a two-syllable word as "master, master."

184. (4) The ability to interpret notes one-and-a-half beats long, followed by half-beat notes (*beat-notes* dotted) is developed by having children establish a strong rhythm, using the formula for the two-beat note "schoo—ool" previously developed, and when movement is well going, change to "schoo—ool time." Charge them to *push the dot*, and insist on hearing the push until you know that the sight of a dot makes them *think*. This may, if preferred, be done without reference to the formula, by illustrating with copious repetitions the *pushing* of the dot, and fixing the whole matter in that way. As a rule, the



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mastery of the dotted beat-note dwindles along indefinitely, when a short daily period of *masterful* and *vigorous work* should impress it firmly in a very short time.

185. (5) The ability to interpret groups of four notes of equal value in one beat is developed by the repetition of four syllables, "lady teacher," or "music teacher," (choose one and stick to it.)

186. (6) The ability to interpret groups of three notes, one long and two short, is developed by words which give the proper quantity and quality, as "girl pupil."

187. (7) The ability to interpret groups of three notes, two short and one long, is developed by using the words "naughty boy."

188. (8) The ability to interpret groups of three notes of equal value (the triplet) is developed by using some combination of three syllables, "Saturday."

189. (9) The ability to interpret groups of two notes of unequal value (a long and a short; three-quarter beat followed by a quarter-beat) is developed by using the word "tar-r-r-dy," drawling out the first syllable as if pointing the finger of scorn at some offender against punctuality.

190. In using the above, the teacher must have a clear idea of just what is being taught, and must guide the scansion of these different syllables so as to illustrate and fix the qualities of the different groups with perfect accuracy.

191. While a class can hardly go wrong in the scansion of "school; master; lady-teacher; *girl* pupil; naughty boy," the combinations of dots with beat notes, "schoo—ool time," of dots with half-beat notes, "tar-r-r-dy," and the triplet, "Saturday," are things that require a careful and firm guiding hand.



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## Note Analysis.

192. Children learn the following things in connection with this formula.

"School" is a one-syllable word.

"School" notes mean that we are to sing once in each beat.

"Master" is a two-syllable word.

"Master" notes mean that we are to sing twice in each beat.

"Lady-teacher" is a four-syllable combination.

"Lady-teacher" notes mean that we are to sing four times in each beat, etc.

193. Preliminary to the scansion of an exercise in 2-4 time containing notes of the denominations of quarters, groups of eighths, sixteenths, an eighth and two sixteenths, two sixteenths and an eighth, etc., the following will be suggestive.

Pointing at the lower numeral in the meter-signature, say:

What kind of a note is the "School" note?

A. The quarter.

How many syllables in each beat of this measure?

A. One.

How many syllables in each beat of this measure?

A. Two.

What is the word when we have two syllables?

A. Master.

How many syllables in each beat of this measure?

A. Four.

What are the words when we have four syllables?

A. Lady-teacher or Music-teacher, (Choose one).

How many syllables in this beat?

A. Three.

Is the first one, or the last one long?

A. The first one.



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What are the words?

A. *Girl* pupil.

How many syllables in this beat?

A. Three.

Is the first one or the last one long?

A. The last one.

What are the words?

A. Naughty boy.

Here is a triplet. How many syllables?

A. Three.

Which is the longest?

A. They are all alike. "Saturday," etc.

194. It must be understood that this is not expected to be a system of "time names," as that term is understood, and there are some combinations which are not covered by the formula.

I have found, however, that aside from the gain made in the definite knowledge of these separate groups, classes which spend a little time in the scansion of these elements, make great gains in articulation and in the feeling for rhythmical movement.

The words may be utilized for the *singing* as well as the scansion of the exercises, instead of using the syllables, do mi sol, etc.

195. Following are three partial groups which can be used in this time work:

SCHOOL.

School | Master | Music teacher / Lady teacher | Girl pupil | Naughty boy | Tardy | Saturday |

BIRDS.

Crow | Blackbird | Yellow hammer | Kingfisher | Chickadee |



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| Pine | Moosewood<br>Rosewood | Sugar Maple | White Maple |
| Sycamore | Alder |

196. *Suggestive questions.* When the meter-signature is $\frac{2}{4}$ what is the "school" note?

A. A quarter-note.

When the meter-signature is $\frac{3}{2}$ what is the "school" note?

A. A half-note.

When the meter-signature is $\frac{6}{8}$ what is the "school" note?

A. An eighth-note.

With half-notes as "school" notes, what are "girl pupil" notes?

A. A quarter and two eighths.



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## CHAPTER EIGHT.

### The Practical Use of Key-Signatures.

197. Three things necessary to be learned in order that pupils may readily assign the proper syllable, numeral, or mental key position, to the note with which their part begins, no matter what the key or at what point in the key a beginning is made.

First: With the G clef in command, and all the staff-degrees in their natural condition (sec. 66 note) 8 or "do" is represented by (not on) the fourth space. (Secs. 57, 222 note).

Second: The last or right-hand sharp in the signature marks the staff position of 7 or *ti* of the major key represented.

Third: The last or right-hand flat in the signature marks the staff position of 4 or *fa* of the major key represented.

198. Concentrate on just two things as necessary to right action. The position of the last sign in the signature, *and the first* note of the exercise or song.

### Blackboard Drill.

199. Give pupils the power to count by syllable or numeral from the last sharp or flat of the *various signatures*, to any given staff-degree either above or below the last degree sharped or flatted.

200. Where c pitch-pipes are used the fourth space (secs. 57, 222) of the treble staff may be designated as *the home of the tone of the pitch-pipe.*

201. Class catechizing is a waste of time. The boy who gets up with an exercise having a key-signature of



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six flats, a meter-signature of $\frac{2}{4}$, beginning with a half-note on the third line, and sings *mi* sustaining it for two beats, has demonstrated that he understands key-signature, meter-signature, and note values. To catechize such a child regarding each new song is to retard his progress. He has arrived at your camp with his mining implements all in good condition, and he longs to be digging down into the heart of the subject instead of giving you a daily inventory of his musical crowbars, picks and shovels.

202. The Keytones of all keys requiring for their representation from one to five sharps are *Diatonic tones in the Key of C*, and consequently each key-tone stands in a definite and simple relationship to the tone of the pitch-pipe $\underline{\underline{c}}$.

203. In the following tables guidance for the actual doing of the thing, *i. e.* finding the key-tone, is contained in the first and fourth columns. The knowledge contained in the second and third columns is tributary and useful, but not essential to right action.

To find the key-tone in any Major Key with sharp signatures by the aid of the $\underline{\underline{c}}$ pitch-pipe or tuning-fork.

| Signatures. | Key of. | Relation of Keytone to key of C. | Sound the p. -pipe and sing: |
|---|---|---|---|
| All degrees natural, | C major, | 8 | do. |
| 1 sharp, | G major, | 5 | do, sol=do. |
| 2 sharps, | D major, | 2 | do, re=do. |
| 3 sharps, | A major, | 6 | do, la=do. |
| 4 sharps, | E major, | 3 | do, mi=do. |
| 5 sharps, | B major, | 7 | do, ti=do. |
| 6 sharps, | F sharp major, | sharp 4 | do. sol, fi=do. |
| 7 sharps, | C sharp major, | sharp 1 | do, di=do. |

204. The form of statement to be used in explaining the foregoing table is as follows:

To find the *do* which belongs with two sharps, sound the pitch-pipe, sing *do*, *re*, and call the latter tone *do*.



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To find the *do* which belongs with three sharps, sound the pitch-pipe, sing *do*, *la*, and call the latter tone *do*, etc., using only the first and last columns of the table.

205. The Tone of the Pitch-Pipe is a *diatonic member of all keys* requiring for their representation from one to five flats, and consequently stands in a definite and simple relationship to the key-tones of these keys.

To find the Key-tone in any Major Key in flat signatures by the aid of the c pitch-pipe or tuning-fork.

| Signatures. | Key of. | Relation of tone of p. -pipe to the key. | Sound the p. -pipe and sing: |
|---|---|---|---|
| All degrees natural. | C major, | 8 | do. |
| 1 flat, | F major, | 5 | sol, fa, mi, re, do. |
| 2 flats, | B flat major, | 2 | re, do. |
| 3 flats, | E flat major, | 6 | la, ti, do. |
| 4 flats, | A flat major, | 3 | mi, re, do. |
| 5 flats, | D flat major, | 7 | ti, do. |
| 6 flats, | G flat major, | sharp 4 | fi, sol, fa, mi, re, do. |
| 7 flats, | C flat major, | sharp 1 | di, do. |

206. The form of statement to be used in explaining the foregoing table is as follows:

With a signature of two flats the tone of the pitch-pipe is *re*. Sound the pitch-pipe and sing *re*, *do*.

With a signature of three flats the tone of the pitch-pipe is *la*. Sound the pitch-pipe and sing *la*, *ti*, *do*, etc., using only the first and last columns of the table. (Secs. 237, 238.)

207. Teachers should remember that the proportion of Theory to Practice should be something like an ounce of the first to a pound of the second.



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## CHAPTER NINE.

### Uniformity of Statement.

All classes in the school system of any city should have a series of explanations which will lead them along to a common understanding of things.

Music abounds in points, the full importance of which cannot be brought out by any definition. These things must be *explained* carefully by the teacher, largely in her own language, but with results which shall conform to the ideas contained in the following statements.

In doing this, the teacher is to guard against promulgating incorrect views and modes of expression, by consulting Chapter Twelve which is devoted to Twentieth Century Errors.

### The Pitch of Sounds and the Means of Representing It.

208. By pitch we mean the point of highness or lowness of a tone.

209. In singing down or up the Major Diatonic Scale the voice rests upon eight pitches, and the difference in pitch between the two extreme tones is called the interval of the Octave.

210. A Key in Music is a Family of Tones.

211. The eight tones of the Major Diatonic Scale do not constitute the whole of the key family; there are, besides, five other members.

212. When the thirteen tones between any given pitch and its octave are sung consecutively we have what is called the Chromatic Scale. This is a scale in which all the steps are half-steps.

213. The eight tones of the Major Diatonic Scale are



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called the Diatonic Tones or Regular Members of the key family. In this scale some of the steps are whole-steps and some are half-steps. (Sec. 18.)

214. The remaining five pitches are called the Chromatic Tones or Occasional Members of the key family. (Secs. 17–24.)

215. The eight pitches spoken of above are designated by using the NAMES of the first seven letters of the alphabet. Each name alphabetically, from A to G names a higher pitch, and at the octave the first name reappears. (Sec. 8 note.)

216. When we speak of the pitch B, E, G, C, or D, we refer to TONES, not letters or staff degrees. (Secs. 8 and note, 287–289.)

217. The remaining five pitches after the eight have been named as above, are designated as follows: When we wish to speak of the pitch next higher or lower than any of those aforementioned, we add the word "sharp" or "flat," thus "A sharp" is the the name of the pitch next above "A," and "A flat" is the name of the pitch next below "A." (Secs. 26–28.)

218. In singing the Major Scale we can begin with any one of the twelve different pitches.

219. Pitch is represented by groups of parallel lines which make spaces. (Sec. 50.)

220. A group of five of these long parallel lines and the six spaces which they make, is called the Staff, and each line or space is called a Staff-Degree. (Secs. 51–53.)

221. The extreme degrees (the highest and lowest) are always Spaces.

222. Staff-degrees are named from the lowest upward; the lines from the first to the fifth, and the spaces from the *first* to the *sixth*. (Secs. 54-57.)

NOTE. If teachers find difficulty in remembering this mode of space naming, remember that the first, second, third, fourth, and fifth spaces are *below* the lines which bear the same names.



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223. As these five lines and six spaces are not sufficient in number to represent all the pitches used in music the staff frequently has to be enlarged.

224. Pitches too high or too low to be represented by, not on (sec. 310) the extreme degrees of the staff, are provided for by placing short parallel lines above or below the permanent staff. These short lines make short spaces, and are called added or leger lines. (Sec. 53.) Thus the staff frequently has *six lines* and *seven spaces*, etc.

225. These added degrees are named so as to indicate the direction in which the enlargement is being carried on. The first line above the staff brings with it the first space above, etc. (Note difference between this and the old naming which designates the *first added* space above as the second.)

226. If we wish the staff to represent the pitch of the high voices of women or children, we put it in charge of the G clef, which commands the second line to represent $\left\{\begin{array}{l}\text{one line, or}\\ \text{once marked}\end{array}\right\}\bar{g}$. (Sec. 35.)

227. If we wish the staff to represent the pitch of the low voices of men, we put it in charge of the F clef, which commands the fourth line to represent small octave f. (Sec. 35.)

228. Regarding the C clef, which, in its relation to the five line staff, is a movable character, it is only necessary to remember that on whatever staff-degree this clef is located, *there is represented* $\left\{\begin{array}{l}\text{one line, or}\\ \text{once marked}\end{array}\right\}\bar{c}$. (Sec. 35.)

229. Because there are more pitches between any given tone and its octave than there are staff-degrees to represent them, a given degree is often called upon to represent several different pitches.

230. The staff-degrees unassisted can represent only the Diatonic Tones of a key, and whenever it is desired



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to represent the Chromatic Tones, the degrees have to be assisted by characters called Sharps, Flats, Naturals, Double-sharps and Double-flats.

231. A Sharp enables a natural staff-degree to represent the next higher pitch in the series of thirteen, or in other words, a pitch one half-step higher. (Sec. 16.)

232. A Flat enables a natural staff-degree to represent the next lower pitch in the series of thirteen, or in other words, a pitch one half-step lower. (Sec. 16.)

233. Double-sharps, double-flats and naturals are used to sharp or flat degrees when conditions are such that the sharp or flat will not answer the purpose. (Secs. 84, 85, 94-98.)

234. The *business* of staff-degrees is, by *command* of a *clef*, to represent absolute pitch. (Secs. 7, 8, 33, 34.)

They are insufficient in number to represent all the pitches of a key, and as each and every degree is likely to be called upon under varying conditions to represent several different pitches, they are in this, their *regular business*, assisted by the sharps and flats. When so assisted, degrees are said to be *sharped* or *flatted*. (Sec. 79.)

235. Sharps and Flats are used for two different purposes in the writing or printing of music.

They are used in the beginning in preparing Key-signatures and in the course of a composition in common with Double-sharps, Double-flats and Naturals, they are used as "accidentals" for the purpose of preparing staff-degrees to represent the Chromatic Tones or Occasional Members of the Key Family. (Secs. 19, 20.)

236. Key-signature means simply "sign of the key," and it is to be found directly to the right of the clef.

237. The Key-signature reappears, or should reappear at the beginning of each new staff, and may be



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described as being the "condition of the staff-degrees at the signature-place." (Root.)

Two guiding questions to be used in this connection:

What is the signature of the Key of C?

A. All the Degrees are natural. (Secs. 66 note, 79.)

What is the signature of the Key of F?

A. One Degree is flatted, all others Natural, etc. (Secs. 66 note, 79.)

238. In actual use these statements of facts regarding signatures are condensed to "natural," "one flat," "four sharps," etc., but in using these abbreviated forms we must understand that the *full* statement includes the *condition of all the staff-degrees* at the signature-place. (Sec. 86.)

239. The sharping or flatting of a Degree at the signature-place affects the eighth degree above or below in the same staff, including also such degrees as may be added in either direction. (Sec. 89.)

240. The Diatonic Tones of any Major Key are named and sung to syllables as follows:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Names. | 1, | 2, | 3, | 4, | 5, | 6, | 7, | 8. |
| Syllables. | Do, | Re, | Mi, | Fa, | Sol, | La, | Ti, | Do. |

241. The Chromatic Tones of any Major Key are named and sung to syllables as follows:

| | | | | | |
|---|---|---|---|---|---|
| Names. | sharp 1, | sharp 2, | sharp 4, | sharp 5, | sharp 6. |
| Syllables. | di, | ri, | fi, | si, | li. |
| Names. | flat 7, | flat 6, | flat 5, | flat 3, | flat 2. |
| Syllables. | te, | le, | se, | me, | ra. |

Both sets of names used in this and the preceding section are Relational names. (Sec. 23.)

242. Staff-degrees are prepared to represent these chromatic tones by sharping or flatting them from their Diatonic condition. (Secs. 84, 85.)

243. The intermediate tone between the diatonic tones 1 and 2 of a major key may derive its name either from the 1 or the 2, and to represent it we can either sharp the degree



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which represents 1, or flat the degree which represents 2.

244. To represent sharp 4, sharp the degree which represents 4 of the key; to represent flat 3, flat the degree which represents 3 of the key. (Secs. 95-99.)

245. *Guiding Questions.* The G clef is in command, the signature is five sharps; what is the diatonic condition of the second line? (Secs. 79–84.)

A. The second line is sharped.

What pitch does it represent?

A. The pitch G sharp. (Absolute name.)

What tone of the key does it represent?

A. 6. (Relational name.)

How shall I make the second line represent sharp 6?

A. By using a Double-Sharp. (Sec. 96.)

How shall I make the second line represent flat 6?

A. By using a Natural. (Sec. 97.)

How shall I make the second line represent 6 again after it has represented sharp 6 or flat 6?

A. By using a Sharp, because the degree is sharped at the signature-place. (Sec. 98.)

246. The simplest way for a singer to explain the difference between Major and Minor keys is to say that Major keys begin on 1 or *do* and Minor keys on 6 or *la*. In other words the Major is the "*do* key," and the Minor, the "*la* key," or again, in the list of relational names in section 23, 1 or do is the Tonic in major keys, 6 or la is the Tonic in minor keys. (Sec. 249.)

NOTE. Eventually in the study of Harmony the minor keys are built up as independent entities, instead of being treated as derivatives from the major keys.

247. The Minor key has no signature of its own, but borrows the signature of the Major key which contains most of its tones, supplying its own characteristic tone chromatically when it is wanted.



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248. The characteristic tone of the Minor is sharp 5 of the major key indicated by the signature.

249. For every major key then, there is a minor key which has the same signature and is called its relative minor. All keys are named from the pitch of their first tone, consequently major keys take their names from the pitch of *do*, while the minor keys take their names from the pitch of *la*. (Sec. 246 and note.)

## Directions for Using the Worcester Key Builder.

Take the small scale and place it on the large scale between the central and right-hand columns, "diatonic" uppermost.

If placed so that "1" is opposite "C," all the stepping-places of the small scale designated by the relational names, 1, 2, 3, etc., coincide with those of the central column designated by the absolute names C, D, E, etc. (Secs. 33, 34.)

If placed so that "1" is opposite any absolute name in the central column except C or F, it will be seen that some of the levels called for by the small scale are not found in the central column and must be sought in the right-hand column. All pitches which are required in following the steps of the small scale are diatonic tones of the key which is being built up.

To illustrate: Wishing to find the diatonic tones of the major key which has A for key-tone, place the small scale so that "1" is to the right of, and opposite "A" in the central column. A glance shows us that 2 is opposite B, but that 3 is on a level with C sharp in the right-hand column, 4 and 5 are opposite D and E, but 6 and 7 find their equivalent levels in the right-hand column at F sharp and G sharp, while 8 is side by side with A of the central column.

Thus the regular members or diatonic tones of the key



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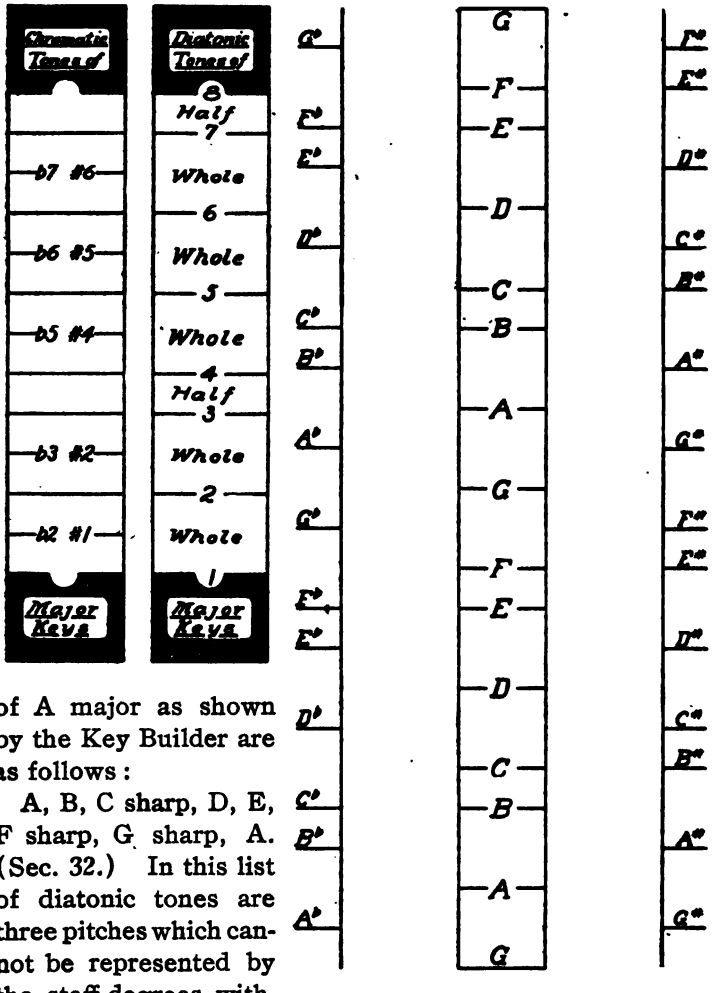
# THE WORCESTER KEY BUILDER.




of A major as shown by the Key Builder are as follows:

A, B, C sharp, D, E, F sharp, G sharp, A. (Sec. 32.) In this list of diatonic tones are three pitches which cannot be represented by the staff-degrees with-



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out assistance: C sharp, F sharp, and G sharp; so in preparing the staff to represent the key of A major, three degrees must receive the assistance of a sharp.

To prepare sharp signatures (secs. 32, 237) with the G clef in command, sharp the *fifth line* and proceed according to section 92.

To prepare sharp signatures with the F clef in command, sharp the *fourth line* and proceed according to section 92.

To prepare flat signatures (secs. 32, 236, 237) with the G clef in command, flat the third line and proceed according to section 93.

To prepare flat signatures with the F clef in command, flat the second line and proceed according to section 93.

Children should use the central and right-hand columns first, going as far as E in the following list of

### Starting Points for Sharp Keys:

C, G, D, A, E, B, F sharp, C sharp.

The central and left-hand columns may then be used, going as far as A flat in the following list of

### Starting Points for Flat Keys:

C, F, B flat, E flat, A flat, D flat, G flat, C flat.

Afterwards both lists may be finished.

### Enharmonic Tones.

Place any straight-edged piece of paper, card-board, or the small scale across the large scale. Level across with the straight-edge, and all pitch symbols which come opposite one another in any two columns, designate equivalent pitches or tone levels, and are therefore enharmonic. (Sec. 29.)

Thus D flat, left-hand column, and C sharp, right-hand column, being on the same level are enharmonic tones; F,



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central column, and E sharp, right-hand column, are enharmonic tones, etc.

After one has used the "Diatonic tone" scale, the method of using the "Chromatic tone" scale will be apparent.

## Intervals.

Two voices sing at the same instant 1 and 3 of a major key, and the intelligent listener is conscious of a *musical effect* which he calls a major third. Intervals thus considered are *emotional* in their character; matters exclusively of hearing.

A school teacher, training her class in tone-perception, sings in succession 1 and 3 of a major key. This succession of tones is also a major third, and also a matter of hearing.

The same teacher places a note on each of two successive lines of the staff, and this is the *written representation* of a third. Should the notes be placed *vertically*, a harmonic third would be represented, but if not, the interval would be a melodic interval. (Sec. 306.) Intervals, then, may be regarded in two ways. First, as the *effect* produced by sounding two tones of different pitch at the same instant, and second, as a *matter of calculation* regarding the difference in pitch between the tones.

Intervals are named from the number of diatonic tones of the key (secs. 18, 19) which they include. This fact makes it possible to compute and name intervals in printed music by counting staff-degrees. (Sec. 59.) The interval 3–5 includes three diatonic tones, and is called a third. The interval 4–8 includes five diatonic tones, and is called a fifth.

## Table of Intervals.

Perfect Primes, 1–1 2–2 3–3 4–4 5–5 etc.
Minor Seconds, 3–4 7–8.



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Major Seconds, 1–2 2–3 4–5 5–6 6–7.

Augmented Second, 4–sharp 5. (Characteristic of minor.)

Minor Thirds, 2–4 3–5 6–8 7–$\underline{2}$.

Major Thirds, 1–3 4–6 5–7.

Perfect Fourths, 1–4 2–5 3–6 5–8 6–$\underline{2}$ 7–$\underline{3}$.

Augmented Fourth, 4–7.

Diminished Fifth, 7–4.

Perfect Fifths, 1–5 2–6 3–7 4–8 5–$\underline{2}$ 6–$\underline{3}$.

Minor Sixths, 3–8 6–$\underline{4}$ 7–$\underline{5}$.

Major Sixths, 1–6 2–7 4–$\underline{2}$ 5–$\underline{3}$.

Minor Sevenths, 2–8 3–$\underline{2}$ 5–$\underline{4}$ 6–$\underline{5}$ 7–$\underline{6}$.

Major Sevenths, 1–7 4–$\underline{3}$.

Perfect Octaves, 1–8 2–$\underline{2}$ 3–$\underline{3}$ etc.

Intervals may be divided, in a general way, into Consonances and Dissonances.

Such as are in themselves satisfactory to the ear are called CONSONANT INTERVALS.

Such as require progression to another interval in order to satisfy the ear are called DISSONANT INTERVALS.

## Chords.

The intelligent combination of three or more tones of a key makes a chord.

Common chord formations are built up with thirds. Using the Tonic (sec. 23) as a fundamental tone, and sounding with it the third and fifth of the key, we get a chord called the TONIC TRIAD.

Using the Dominant (sec. 23) as a fundamental tone and sounding with it the third and fifth tone above, (5–7–$\underline{2}$) we get a chord called the DOMINANT TRIAD.

Using the Subdominant (sec. 23) as a fundamental tone and sounding with it the third and fifth tone above, (4–6–8) we get a chord called the SUBDOMINANT TRIAD.



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Any diatonic tone (secs. 18, 19) may be taken as the fundamental tone upon which to build a triad, and the triads of the Supertonic, Mediant, Submediant and Leading-Tone are called SECONDARY or SUBORDINATE TRIADS to distinguish them from those founded on the Tonic, Dominant and Subdominant, which are called PRIMARY or PRINCIPAL TRIADS. (Sec. 23.)

Triads are further known as MINOR or MAJOR, according as the lower third in the triad is minor or major (the fifths are perfect in both varieties), and DIMINISHED in case the third is minor and the fifth is diminished. The triad on the Leading-Tone ($\bar{7}$–2–4) with a minor third and diminished fifth is a dissonant chord, and as the Leading-Tone is impossible as a resting-point, (secs. 23, 308) it demands a progression or resolution to a consonant chord, after this manner: from seven we progress to one, from two to one, from four to three.

The duplication of any tone of a triad in another octave gives a chord of *four tones*, but as nothing new has entered into the chord, its *name* remains the same. Triads may be extended by the addition of a tone a *third above*. This makes another kind of four-tone chord called a CHORD OF THE SEVENTH.

By thus extending the Dominant Triad so that it shall include four of the key, 5–7–$\underline{2}$–$\underline{4}$, we obtain the DOMINANT CHORD OF THE SEVENTH, so called from its fundamental tone (the Dominant) and the interval between its extreme tones (a seventh). This chord *demands* resolution which is usually effected thus: from five progress to eight or one, from seven to eight, from two above to eight, and from four above to three above.

So long as the fundamental tone of a chord appears as the bass, or lowest tone of the harmony, the upper tones may be shifted about into higher octaves without changing either the *character* or the *name* of the chord.



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If, however, the bass tone should be either the *third* or *fifth* from the fundamental, the chord is said to be *inverted.*

Thus if we take the *third* of the Tonic Triad as the bass tone, the chord will be called the TONIC CHORD OF THE SIXTH, or the chord of the sixth on the Tonic.

If we take the *fifth* of the Tonic Triad as the bass tone, the chord will be called the TONIC CHORD OF THE SIXTH AND FOURTH, or the chord of the sixth and fourth on the Tonic.

Details will be given in the upper grade schedules.



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## CHAPTER TEN.

### The Length of Sounds and Silences and the Means of Representing It.

250. A Measure is a group of accents.

251. A Two-beat Measure is a group of two accents, one strong and one weak. (Other measures are defined in the same way). (Secs. 36-41.)

252. In writing music, after the staff has been provided with a clef and key-signature, we should next indicate the kind of measure by means of the Meter-Signature.

253. The Meter-Signature consists of two numerals, each two spaces tall, placed vertically on the staff, one *above* and one *below* the third line. Its place is directly to the right of the key-signature.

254. The Upper Numeral is to tell the kind of measure. 2, 3, 4, 6, etc., mean two-beat, three-beat, four-beat, six-beat, etc., measures.

255. The Lower Numeral is to tell the kind of note to be performed in the time of one beat. 1, 2, 4 or 8 mean that whole- half- quarter- or eighth-notes are sung in the time of one of the accents or beats. (Secs. 36, 37.)

256. Notes of other denominations are longer or shorter according to their relations to the beat-note.

257. A Note is a character placed upon a staff-degree to call into action the pitch which it (the staff-degree) represents, or, according to Mr. Mathews, "To indicate a musical utterance." (See Errata, p. 98.)

258. The three qualities necessary to a musical utterance are Pitch, Length, and Stress or Accent.



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259. Notes indicate the Pitch of musical utterances by the position of the note-head which, when placed upon a staff-degree, calls it into action.

260. Notes indicate the Length of musical utterances by their various shapes from which we know their value by comparison with the beat-note. (Secs. 255, 256.)

261. The relative Stress or Accent of a musical utterance is shown by the position of the note in the written measure, and by signs placed over or under the note.

The position of the strong accent is marked by a vertical line drawn across the staff called a Bar. A Double Bar marks the close of a movement or the end of a composition.

262. A Measure is represented to the eye by the section of staff enclosed between two bars. (Secs. 36-47.)

NOTE. Measures themselves are sometimes loosely called "Bars," but let us keep clearly in mind that a bar is a *vertical line* drawn across the staff to mark the place of the strong accent, and not the *hole* between two of these vertical lines.

263. JUST BEFORE THE BAR IS A SOFT BEAT, JUST AFTER THE BAR IS A LOUD ONE. (Loud and soft mean more to young children than strong and weak).

The foregoing statement is something to conjure with. The full measure of its usefulness does not appear at the first glance.

264. The bar is the most important character in printed music *if its distinctive function is rightly understood and applied in sight singing.* Children must be taught to awaken in themselves the real form of any kind of measure at will. (Secs. 35-41.) They must be taught that having begun an exercise they must *Pass each Bar* when the Strong Feeling comes. They must be taught to *make but one attempt* at interpreting a note. In all your teaching *minify* the importance of any individual note, and



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*magnify* the importance of the *Bar*. If one omits to sing three-fourths of the tones called for in any given measure, but maintains his *rhythmical poise* so that his mind is clear to interpret the first note over the bar, *the movement is still good.*

When the strong feeling comes, no matter how much of the current measure is unsung, it *must* be left *without mental confusion.* That measure is of yesterday, the work of to-day demands our best efforts. Concentrate on The Bar and the *First Note after it.*

265. A Rest is "A Rhythmical Silence" (Mathews), or a silence during which musical time goes on.

266. The drum as played for marching is a good example.

drum, drum, drum, drum, drum.

*left*, right, *left*, right, *left*, right, *left*, right.

The silence after the first, second, and fifth "drums" is a rhythmical silence during which the marching continues.

267. The periods of silence are indicated in written music by characters called Rests. (Sec. 100.)

268. There are as many kinds of Rests as there are of Notes, and they are named in the same way. (Sec. 100.)

269. The duration of notes and rests is increased by characters called Dots and Holds.

270. A Dot placed *after* a note or rest calls for an increase of one-half in the length of the tone or silence indicated by the original character.

By means of a Dot the length of the tone or silence indicated by a four-beat note or rest, is increased to six beats.

By means of a Dot the length of the tone or silence indicated by a two-beat note or rest, is increased to three beats.

By means of a Dot the length of the tone or silence



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indicated by a one-beat note or rest, is increased to one-and-a-half beats.

Values are still farther increased by dotting the original dots. This is called double-dotting, and notes or rests so treated are said to be double-dotted.

The first dot acts as above, and succeeding dots add one-half to the value of their predecessor. Thus a four-beat note double-dotted accumulates value as follows:

4 beats + 2 beats + 1 beat = 7 beats.

(The plus marks take the places of dots.)

271. A dot or pointed stroke placed *over* or *under* a note to show that the tone it calls for is to be sung in a disconnected manner, is called a Staccato Mark.

272. A Hold (sometimes called Pause) is a character which is placed over or under notes, rests or bars, to indicate a prolongation of sound or silence at the pleasure of the conductor or performer.

273. In observing a hold over a note or rest the Rhythm is supposed to continue until the expiration of the time value of the note or rest, and then be held up until a new beginning is made.

274. Each note indicates a separate musical utterance, but sometimes a curved line called a Tie is used to connect two notes *which call for the same pitch*, to show that they are to be merged into one.

275. A Tie, then, is a curved line connecting two notes which call for the same or equivalent pitches (sec. 29), to show that the second pitch is to be performed as a continuation of the first, and not as a separate utterance.

276. Ties are principally used to connect notes whose combined value cannot be expressed by a single note, but sometimes a poem is set to music in which the number of syllables in the corresponding lines of different stanzas varies, and then conditional ties show that some verses require the tied notes, and others the separate utterances.



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277. A Slur is a curved line drawn over or under a group of *two or more* notes which call for *different pitches*, and in vocal music usually indicates that two or more pitches are to be sung smoothly to a single syllable.

NOTE. Observe that in the last two definitions the important thing in the tie is that the two notes shall call for *the same* pitch, and in the slur, that they shall call for *different pitches*.

The ordinary definitions then, which attach importance to the fact that the notes are, or are not, on the *same line or space*, do not cover the ground. (Secs. 302–304.)

For instance, in the Key of F two notes on the third line (G clef) with a natural between them, and united by a curved line would, according to the ordinary definition, be tied, when as a matter of fact they are *slurred*.

On the other hand, two notes occupying a space and the next higher line, and calling for the pitches a sharp and b flat (sec. 35) would be *tied* by a curved line passing from one to the other. (Secs. 28, 29.)

278. Syncopation is a disturbance of the regular accents in a measure which throws the strong accent into another place, thereby producing a "Rhythmic Clash." (Mathews.)

279. Syncopation is frequently expressed by tying a note which occupies a weak beat to one which occupies a strong one. For instance, the notes in the second and third beats of a four-beat measure, or in the last beat of one measure and the first beat of the next, are often united by a Tie. In these cases the *one musical utterance* indicated by the *two tied notes* is to be sung with the *combined power* of the *two* accents.

280. When several "parts" are being performed simultaneously a "rhythmic clash" of this sort is usually confined to one or two of the parts, while the others carry on the regular accent.

The occurrence of Syncopation in any part lays an added obligation upon those rendering the other parts to mark out the regular accent with extra vigor.



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281. A Triplet is a group of three tones of equal length where groups of two or four might be expected.

Specifically the Triplet may appear in any one of the following relations: As a group of three tones of equal length sung in the time of two beats,

or

As a group of three tones of equal length sung in the time of one beat,

or

As a group of three tones of equal length sung in the time of a half-beat,

or

As a group of three tones of equal length sung in the time of a quarter-beat.

282. I. Triplets are represented by groups of three notes of equal value which are to be performed in the time of *one note* of the *next higher denomination.*

II. Triplets are represented by groups of three notes of equal value which are to be performed in the time of *two notes of like value.*

283. The special Mark of the Triplet is a curved line over or under the group of notes, with a "3" inside the curve.

284. A given time value may also be divided so as to contain 5, 6, 7, 9, etc., separate utterances. (Secs. 37, 305.)



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## CHAPTER ELEVEN.

Providentially, as it seems to me, a man, Martin by name, came around to inspect the operations which were being conducted on the Educational Farm and he looked over the fence to see what was taking place in the little garden plot which is devoted to the cultivation of Music.

When the first paroxysms of laughter had in a measure abated he arose from among the bruised and battered herbage where he had been writhing in boisterous mirth, and wrote the following which I am going to use in lieu of a preface. Perhaps the observing can discover in the quotation the excuse for this book.

Selected from Emmy Lou, by George Madden Martin. McClure, Phillips & Company, New York, Publishers.

"Hardly had the Second Reader begun, when one Friday the music man came. And after that he came every Friday and stayed an hour.

He was a tall, thin man, and he had a point of beard on his chin that made him look taller. He wore a blue cape, which he tossed on a chair. And he carried a violin. His name was Mr. Cato. He drew five lines on the blackboard, and made eight dots that looked as though they were going upstairs on the lines. Then he rapped on his violin with his bow, and the class sat up straight.

"This," said Mr. Cato, is "A," and he pointed to a dot. Then he looked at Emmy Lou. Unfortunately Emmy Lou sat at a front desk.

"Now, what is it?" said Mr. Cato.

"A," said Emmy Lou, obediently. She wondered. But she had met A in so many guises of print and script that she accepted any statement concerning A. And now a dot was A.

"And this," said Mr. Cato, "is B, and this is C, and this



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D, and E, F, G, which brings us naturally to A again," and Mr. Cato with his bow went up the stairway punctuated with dots.

Emmy Lou wondered why G brought one naturally to A again.

But Mr. Cato was tapping up the dotted stairway with his bow. "Now what are they?" asked Mr. Cato.

"Dots," said Emmy Lou, forgetting.

Mr. Cato got red in the face and rapped angrily.

"A," said Emmy Lou, hastily, "B, C, D, E, F, G, H," and was going hurriedly on when Hattie, with a surreptitious jerk, stopped her.

"That is better," said Mr. Cato, "A, B, C, D, E, F, G, A—exactly—but we are not going to call them A, B, C, D, E, F, G, A—" Mr. Cato paused impressively, his bow poised, and looked at Emmy Lou—"we are going to call them"—and Mr. Cato touched a dot—"do"—his bow went up the punctuated stairway—"re, mi, fa, sol, la, si. Now what is this?" The bow pointed itself to Emmy Lou, then described a curve, bringing it again to a dot.

"A," said Emmy Lou. The bow rapped angrily on the board,and Mr. Cato glared.

"Do," said Mr. Cato, "do—always do—not A, nor B, nor C, never A, nor B, nor C again—do, do," the bow rapping angrily the while.

"Dough," said Emmy Lou, swallowing miserably.

Mr. Cato was mollified. "Forget now it was ever A; A is do here. Always in the future remember the first letter in the scale is do. Whenever you meet it placed like this, A is do, A is do.

Emmy Lou resolved she would never forget. A is dough. How or why or wherefore did not matter. The point was, A is dough. But Emmy Lou was glad when the music man went. And then came spelling, when there was always much bobbing up and down and changing of places and tears. This time the rest might forget, but Emmy Lou would not. It came her turn.

She stood up. Her word was Adam. And A was dough. Emmy Lou went slowly to get it right. "Dough-d-dough-m, Adam," said Emmy Lou.

They laughed. . . . . Then Dear Teacher lifted Emmy Lou to her lap. And when she was sure they were every



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one gone, Emmy Lou cried. And after a while Dear Teacher explained about A and do, so that Emmy Lou understood."

The genius of Mr. Cato, unfortunately, is still *with* us and *of* us. So also, thank God, is the spirit which animated "Dear Teacher," which in numberless cases has to serve as mediator between the "dark speech upon the harp" of blundering Catos, and the minds of little children.

The violin has been exchanged for a tuning-fork or chromatic pitch-pipe, but Mr. Cato's facts (?) are as mixed as ever.

If you doubt it read chapter twelve.

The authors of the books from which these extracts were taken are unanimous in urging the need of UNIFORMITY IN MUSICAL STATEMENT. So far I am in accord, but I further believe that our statements, to possess any value, must not only have uniformity, but must also be in every particular

UNIFORMLY TRUE.

I KNOW that the theory contained in this book will, so far as it goes, stand the test of close analysis as well as the average statute law (you know what that means), for it has been through the hands of experts, and to any one outside my own teaching force who may read the book I would like to say: If you are *unable at first sight* to grasp some of the distinctions made, throw down the book in disgust, if you please, and let the leaven work. Sooner or later in your search for Truth *you will pick it up again and see that it is correct.*

THE ALL-IMPORTANT STEP

to be taken in the interest of uniformity is to get down to a basis of *Truth*, for certainly all effort put forth *to get uniformity in the statement of error*, is wasted.



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When every one engaged in teaching the subject gets down to a correct understanding of the *real phenomena* of music as a department of knowledge entirely distinct from that of the *characters by which those phenomena are represented*, and learns to keep his statements relative to the *real thing* and its *representation*, clear and well defined; then, and then only, shall we get "uniformity" that is worth anything.



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## CHAPTER TWELVE.

### Twentieth Century Errors.

Statements to be Avoided, with Reasons. Selected from writers whose ink is scarcely dry. The special points of misstatement italicized, and dates of publication given.

285. 1. "The series of *seven sounds* within the limit of the octave is called a scale." 1902.

Our major diatonic scale has *eight* sounds. Would any teacher of piano or school music accept as correct, the playing or singing of a scale which stopped on the leading-tone? (Secs. 23, 308.)

286. 2. "The staff consists of five lines and the *spaces between them*." 1900.

Universal usage says that the staff has two spaces with lines only on *one side*, which are just as useful, just as permanent, and just as freely used as the others.

Each succeeding edition of a dictionary defines some additional words which *usage* has enthroned since the previous issue. Is our unwillingness to square our definitions with our usage due to lack of understanding or to "A foolish consistency?" (p. 3.)

287. 3. "The *first seven letters* of the alphabet are used in *naming the degrees of the staff*." 1895.

No, they are not. The only names staff-degrees have are first line, second line, third space, fourth space, etc.

288. 4. "The *notes* have been named according to the *first seven letters of the alphabet*." 1900.

No. The notes have never had any other names than whole, half, quarter, eighth, sixteenth, etc., and those



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other names which are never used in America at this day, semi-breve, minim, crotchet, quaver, semi-quaver, etc.

289. 5. "Each *note* receives its name *from the position it occupies on the staff.*" 1900.

According to section 287, *staff-degrees* are *named by letters;* according to section 288, *Notes* are *named by letters*, and according to section 289, *Notes* are *named by staff-degrees*, or "from the position it occupies on the staff." Any confusion about that?

290. 6. "The treble, or G clef is designated by placing the character on the second line. Accordingly, *the note placed on that line is called 'G'.*" 1900.

No, there are six kinds of notes more or less commonly used in vocal music, and their names are the same, regardless of their position on the staff. Whole-note, half-note, etc.

291. 7. "When it is desired to *raise* the *pitch* of a line or space a *semitone*, a sharp is used." 1902.

This is correct in so far as it shows that the thing affected is the staff-degree, and not the note; but sharps do not *raise* anything. A sharp enables a staff-degree to represent a tone a half-step higher. (Secs. 66–70.)

292. 8. "A flat *before a note* diminishes it one *semitone* (half-tone) in pitch." 1900.

293. 9. "A Double-Flat *lowers a note* two *semitones*, or one *whole tone* in pitch." 1900.

"Natural—a character which restores a sharped or flatted *note* to its natural *position.*" 1901.

Why "diminishes" in one place and "lowers" in another?

Sharps, flats, naturals, double-sharps, or double-flats have *no possible effect upon* "notes."

They all do something to *staff-degrees*, but not to notes. The work of any of these characters is *always done* before a note is put on the degree affected by them.



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For "tone" and "semitone" I would prefer step and half-step. For the sake of clearness I would use "tone" to mean an individual sound only. To illustrate: The pitch F is a *tone*, the pitch G is a *tone*, and the hole or distance between these two *tones* is a *tone*. A little mixed, you say. Then purge your vocabulary of "tone" and "semitone" as *terms of measurement*, and use instead step and half-step. (Secs. 66–70, 233.)

Does any one suppose that double-sharps or double-flats modify *notes*, *staff-degrees* or *pitches* "TWO semitones or a WHOLE TONE in pitch?" I suppose that belief must prevail somewhere, or it would not continue to be perpetuated in text-books and musical dictionaries.

Let us examine the facts.

I. The chromatic tones of a key (secs. 19, 20) are always represented by sharping or flatting (secs. 66–77) the staff-degrees from their diatonic condition. (Secs. 83–86.)

II. All computations regarding key-relations are made upon a basis of the *Diatonic Tones*, and not of the Chromatic Tones.

III. Whenever a pitch which has to be designated by the words *double-sharp* or *double-flat* appears in any common major key, it is a CHROMATIC TONE, and like all chromatic tones it is reckoned, *in its representation*, as a dependency of some DIATONIC TONE which is a half-step lower or a half-step higher; *never more* and *never less*. Refer the double-sharp or double-flat down or up a *whole-step* and you will find *another chromatic tone* which has no more value as a computation point than the first.

In fine: Double-sharps and Double-flats are ALWAYS USED AS "ACCIDENTALS," NEVER AS "ESSENTIALS." (Sec. 93, note.)

They differ in effect in no way from the other accidental signs, sharps, flats and naturals (sec. 301), and the only possible effect of any of them is to *make a staff-degree rep-*



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*resent a chromatic tone* instead of a diatonic tone. Such a change in representing power NEVER EXCEEDS A HALF-STEP in either direction.

I can imagine some one refuting this statement and offering conclusive proof of its falsity by producing something written say in the key of C in which C double-sharp appears. Now every one knows that in transitional passages, modulations often occur where the composer, in order to reach a new key, or even to produce a desired effect in the same key, passes successively into several different keys, without remaining long enough in any of them to make it desirable to write a new signature.

It is very clear to the composer just what key he is thinking in at a given instant. All the staff-degrees may be natural and yet the music may actually be temporarily in the key of B, and if he wishes to express sharp two he will write C double-sharp. The FACTS of the key of B and its proper signature are in the composer's mind, and he writes C double-sharp as the only way of expressing sharp two in that key. This is a case where the two classes of key-material, diatonic and chromatic, are, as it were, in solution in the mind of the composer and are changing places so rapidly that a formal representation of each change is not considered worth while.

A Double-sharp is a character used to sharp a sharped degree from its diatonic condition. (Secs. 84, 85, 94–99, 223.)

A Double-flat is a character used to flat a flatted degree from its diatonic condition. (Secs. 84, 85, 94–99, 223.)

294. 10. "Place a sharp on *D*, fourth line." 1901.

Neither a sharp nor any other character can be placed on D, for D is a pitch — a tone; something to be heard, not seen. "Place a sharp on the fourth line," would be correct. The D used in this connection is not only superfluous, but incorrect. (Sec. 8.)



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295. 11. "Many of them (boys) have already lost their high *notes*." 1901.

"Tones" is of course the proper word.

296. 12. "Place a *half-note* on *D*, fourth line. Sound D, and indicate tempo." 1901.

Never mix up the staff-degree with what it represents. Place your character on the line, then sound the pitch which the *line represents*.

297. 13. "What *note* comes next below it in the scale?" 1901.

The scale is composed of *tones*, not notes.

298. 14. "Is this sharp 4 an accidental sharp? Yes. Why? Because it *does not belong in the key*." 1901.

This author confuses "Scale" and "Key." Sharp 4 does not belong to the *major diatonic scale*, but is, most assuredly, a well recognized member of the *key*. (Secs. 16–25.)

299. 15. "You have sung all the tones of the major scale *raised a half-step*, which can be thus *raised* without making it the next tone in the major scale." 1901.

"Since each of the *seven sounds* of the normal scale, C major, may be raised a *semitone*, each may likewise be *lowered* a semitone," etc. 1902.

The grammatical error in the 1901 quotation is doubtless an oversight, but as statements of theory concerning chromatic tones and transposition, they are both rather remarkable. (Secs. 16–22.)

Tones of the major, or of any other scale or key cannot be "raised."

You can use the diatonic tone 1, or the chromatic tone sharp 1, and how much easier to teach that there are *two classes* of key material instead of trying to teach something which is not the major scale by "*raising*" its "*tones*."

300. 16. "An accidental at the beginning of a measure *affects that note* throughout that measure." 1900.



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An accidental at the beginning of a measure is applied to, and affects, *a staff-degree* and not a note.

301. 17. "Do not use the word 'natural' because *it has no meaning to students who are not instrumentalists.*" 1901.

This author, in common with some others, prefers "cancel" as a substitute for natural. Just why "natural" should be meaningless to a singer I do not know. It is not meaningless to my pupils. They understand it in the abstract as describing one of the three conditions in which staff-degrees are always found at the signature-place. They understand it in the concrete as the name of a character by which a flatted degree is sharped and a sharped degree is flatted. (Secs. 96, 97.)

302. 18. "The tie, which passes from *one note* to the *same note*, etc." 1900.

In common with most other people I have always supposed that the necessity for a tie never arose until we had *two* notes.

303. 19. "A tie, ties two notes together, which are on the *same line or space.*" 1901. (See secs. 275, 276, note following 277).

304. 20. "A slur looks like a tie, but is applied to notes on *different lines and spaces.*" 1901. (See sec. 277 and note.)

305. 21. "*A note* can also be *divided* into *groups* of 5, 7, 9, 11, etc." 1900.

No. A note is *one*, and of course cannot be a group. What he seeks to convey is that a given time value, say one beat, may be divided so as to contain varied numbers of utterances, expressed by groups of 5, 7, 9, 11, etc., notes.

306. 22. "First have the children sing the scale, gradually skipping around until they have the fifth *interval* in their minds. Then drill on the fourth *interval*, etc." 1903.

Here the proper word to use is *tone*, or *sound*. "Interval" is the name of two things, in both of which *two* dif-



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ferent tones are concerned. Strike at the *same time* two piano keys which will sound 1 and 5 of a key, and a musician will tell you that he hears a fifth. Strike the two keys *one after the other*, and ask what is the distance, or interval, between the two tones, and the musician will say "a fifth." The first is sometimes termed a harmonic interval, and the second a melodic interval. (pp. 75, 76.)

307. 23. "Upon examining the 2nds and *3rds found in the normal major scale*, etc." 1902.

The *only* intervals in the major scale are 2nds, either major or minor. If you doubt, play or sing it and tell me if you hear any 3rds. If this author were writing of the Chinese scale (sec. 14), his language would be valid, for that contains both 2nds and 3rds (using our measurements). It is the old, old story of confounding "scale" and "key."

The diatonic tones of a key sung in *regular succession* make the major scale; taken in *any order* which contains 3rds they make a melody which is *not the scale*. (16, 17, 18.)

308. 24. "Leading-*note*. So named because of *its tendency to ascend*." 1902.

The old confusion of "note" and "tone." *Notes* and all other musical signs are dead as a "door nail," and have no tendencies, other than to remain where they are placed.

The *Tones of a Key*, however, are full of life and emotional tendencies, but even *they* lack the power of locomotion implied in the above definition. They are immutable. (Sec. 74.) I doubt if I can better impress the distinction I wish to make than by the use of a very, very homely illustration: The awl brought to school by the shoemaker's son and driven up through the seat of some other boy, derives its power not from its "tendency to ascend," but from its extreme uncomfortableness as a resting-point. The awl is perfectly inert, but the boy who estab-



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lishes the right relations with it, is irresistibly impelled to move, and the exact parallel is true of the Leading-tone.

Another view: The Leading-tone is like a mountain guide-board, pointing the way to the summit (the Tonic), reassuring the traveler, and showing the direction of the ascent, but never manifesting any "tendency to ascend" itself. (Sec. 23.)

309. 25. "Give the pitch *of* C, and ask the class to sing 1, 3, 5. They now have their starting *note*." 1901.

"Note" and "tone" again, but I want to call attention here to the word "of." In reading this book have you felt the need of this word in statements like the above?

Does "the pitch *of* C" mean *more* than, *less* than, or *the same* as, "the pitch C?"

The pitch C and its fellow pitches do the bidding of their master, the composer, just as truly as the man John, who blacks his boots, or the man William, who cares for his garden; and is not the word "of" equally out of place in both the statements which follow?

The pitch *of* C is the Tonic.

The man *of* John is the bootblack.

This is of minor importance, but in the interest of simplicity and straightforwardness let us cut out the "*of*."

310. 26. "Middle C is represented *on* a leger (light) line." 1902.

"The G clef, therefore, *fixes G upon* the second line of the treble staff." 1902.

Pitches are represented BY, not *on*, lines or spaces, and such statements as the two just quoted are inconsistent with this fact. (Secs. 61-65, 226-228.)

Does any one think that degrees of the treble staff must have anything *on* them in order that $\bar{g}$, $\bar{a}$, $\bar{b}$ or $\bar{e}$ may be represented?

With the degrees in their natural condition (secs.



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78-81), the pitch $\bar{\bar{g}}$ is represented BY the second line of the treble staff *throughout its entire length* from the clef onward.

It would be easy to quote numberless compositions in which, from beginning to end, the second line has no musical character "on" it save the G clef. The line is there all the time representing the pitch $\bar{\bar{g}}$, but because the composer does not wish to use this pitch it is not called into action. Let me reiterate: Pitch is not represented *on* staff-degrees, but BY THE DEGREES THEMSELVES. (Secs. 106-108.)

## The Foregoing List

might be extended indefinitely if one were disposed to split hairs.

My purpose, however, in introducing such a list is that the points made in the first ten chapters may be farther impressed by comparison.

For school teachers, who are invariably busy people, it is necessary that a list of the statements to be *avoided* and the list of those which are to be *taught*, should be equally easy of access.

In order that I might avoid the danger of being addressed in the words of Holmes to the Katydid: "Thou say'st an undisputed thing in such a solemn way," I have confined my quotations with a single exception, to extracts from publications issued within the last three years.

---

"No one knows a thing for sure until he tells it to some one else." —*Elbert Hubbard,—Philistine, 1903.*

"A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, that he is wiser to-day than he was yesterday."

—*The American Preceptor, 1794.*



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"Nothing is final or absolute, nor can it be, in a world where nothing is permanent but change."

—*Elbert Hubbard,—Philistine, 1903.*

**So here endeth the Worcester Music Manual, as written by Charles I. Rice, with the vain hope that the careful student of its teachings may derive half the benefit that has accrued to the author through the writing of it.**

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## ERRATA.

Sec. 57. For "about ten years ago," substitute "about thirty-four years ago."

Secs. 44, 257. Mr. Mathews, to whose "Primer of Music" I am directly indebted for the "musical utterance," says that the idea is now about forty-one years old, and probably was original with one J. William Suffern.



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